San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

FEB 2 0 2018

Mr. Rene Soto
Bronco Wine Company
PO Box 789
Ceres, CA 95307

Re: Proposed ATC / Certificate of Conformity (Significant Mod)
Facility Number: N-1665
Project Number: N-1172886

Dear Mr. Soto:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. You requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The proposed project is to establish a combined total VOC emissions limit for wine storage tanks operating under permits N-1665-497 through '-506, and '-508 through '-513. This combined total VOC emission limit will replace the existing annual throughput limit in each permit.

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the Authority to Construct with a Certificate 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 Authority 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. Nick Peirce, Permit Services Manager, at (209) 557-6400.

Thank you for your cooperation in this matter.

Sincerely,

Arnaud Marjollet
Director of Permit Services

Enclosures

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

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

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

www.valleyair.org www.healthyairliving.com

San Joaquin Valley Air Pollution Control District

Authority to Construct Application Review

Modification to existing Wine Storage Tanks Permits

Facility Name:	Bronco Wine Company	Date:	February 9, 2018
Mailing Address:	PO Box 789 Ceres, CA 95307	Engineer:	Jag Kahlon
		Lead Engineer:	Nick Peirce
Contact Person:	Rene Soto		
Telephone:	(209) 289-3064		
Fax:	N/A		
E-Mail:	rene.soto@broncowine.com		
Application #(s):	N-1665-497-4 to '-506-4, '-508-3 to '-513-3		
Project #:	N-1172886		
Deemed Complete:	November 9, 2017		

I. Proposal

Bronco Wine Company has proposed to establish a combined total VOC emissions limit for wine storage tanks operating under permits N-1665-497 through '-506, and '-508 through '-513. This combined total VOC emission limit will replace the existing annual throughput limit in each permit.

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

The draft ATCs are included in **Appendix A**.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (2/18/16)
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 4101	Visible Emissions (2/17/05)
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 6342 Bystrum Road, Ceres, California. The wine storage tanks under this project are not located within 1,000 feet of any K-12 school. Therefore, public notice under the California Health & Safety Code 42301.6 is not required.

IV. Process Description

Bronco Wine Company 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.

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_2 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:

Permit #	Equipment Description
N-1665-497-3	14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1410) WITH PRESSURE/VACUUM VALVE
N-1665-498-3	14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1411) WITH PRESSURE/VACUUM VALVE

Continue...

Permit #	Equipment Description
N-1665-499-3	14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1412) WITH A PRESSURE/VACUUM VALVE
N-1665-500-3	14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1413) WITH A PRESSURE/VACUUM VALVE
N-1665-501-3	14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1414) WITH PRESSURE/VACUUM VALVE
N-1665-502-3	14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1415) WITH PRESSURE/VACUUM VALVE
N-1665-503-3	14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1416) WITH PRESSURE/VACUUM VALVE
N-1665-504-3	14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1417) WITH A PRESSURE/VACUUM VALVE
N-1665-505-3	14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1418) WITH A PRESSURE/VACUUM VALVE
N-1665-506-3	14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1419) WITH A PRESSURE/VACUUM VALVE
N-1665-508-2	23,609 GALLON STAINLESS STEEL WINE STORAGE TANK (TANK B231) WITH PRESSURE/VACUUM VALVE LOCATED INSIDE A CLIMATE CONTROLLED BUILDING
N-1665-509-2	23,609 GALLON STAINLESS STEEL WINE STORAGE TANK (TANK B232) WITH PRESSURE/VACUUM VALVE LOCATED INSIDE A CLIMATE CONTROLLED BUILDING
N-1665-510-2	14,376 GALLON STAINLESS STEEL WINE STORAGE TANK (TANK B141) WITH PRESSURE/VACUUM VALVE LOCATED INSIDE A CLIMATE CONTROLLED BUILDING
N-1665-511-2	14,376 GALLON STAINLESS STEEL WINE STORAGE TANK (TANK B142) WITH PRESSURE/VACUUM VALVE LOCATED INSIDE A CLIMATE CONTROLLED BUILDING
N-1665-512-2	7,290 GALLON STAINLESS STEEL WINE STORAGE TANK (TANK B71) WITH PRESSURE/VACUUM VALVE LOCATED INSIDE A CLIMATE CONTROLLED BUILDING
N-1665-513-2	7,290 GALLON STAINLESS STEEL WINE STORAGE TANK (TANK B72) WITH PRESSURE/VACUUM VALVE LOCATED INSIDE A CLIMATE CONTROLLED BUILDING

Proposed Modification:
Replace annual throughput limit with a combined annual VOC emission limit for the tanks under permits N-1665-497 through '-506, '-508 through '-513.

Permit #	Equipment Description
N-1665-497-4	MODIFICATION OF 14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1410) WITH PRESSURE/VACUUM VALVE: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513

Continue...

Permit #	Equipment Description
N-1665-498-4	MODIFICATION OF 14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1411) WITH PRESSURE/VACUUM VALVE: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513
N-1665-499-4	MODIFICATION OF 14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1412) WITH A PRESSURE/VACUUM VALVE: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513
N-1665-500-4	MODIFICATION OF 14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1413) WITH A PRESSURE/VACUUM VALVE: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513
N-1665-501-4	MODIFICATION OF 14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1414) WITH PRESSURE/VACUUM VALVE: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513
N-1665-502-4	MODIFICATION OF 14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1415) WITH PRESSURE/VACUUM VALVE: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513
N-1665-503-4	MODIFICATION OF 14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1416) WITH PRESSURE/VACUUM VALVE: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513
N-1665-504-4	MODIFICATION OF 14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1417) WITH A PRESSURE/VACUUM VALVE: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513
N-1665-505-4	MODIFICATION OF 14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1418) WITH A PRESSURE/VACUUM VALVE: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513
N-1665-506-4	MODIFICATION OF 14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1419) WITH A PRESSURE/VACUUM VALVE: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513
N-1665-508-3	MODIFICATION OF 23,609 GALLON STAINLESS STEEL WINE STORAGE TANK (TANK B231) WITH PRESSURE/VACUUM VALVE LOCATED INSIDE A CLIMATE CONTROLLED BUILDING: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513

Continue...

Permit #	Equipment Description
N-1665-509-3	MODIFICATION OF 23,609 GALLON STAINLESS STEEL WINE STORAGE TANK (TANK B232) WITH PRESSURE/VACUUM VALVE LOCATED INSIDE A CLIMATE CONTROLLED BUILDING: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513
N-1665-510-3	MODIFICATION OF 14,376 GALLON STAINLESS STEEL WINE STORAGE TANK (TANK B141) WITH PRESSURE/VACUUM VALVE LOCATED INSIDE A CLIMATE CONTROLLED BUILDING: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513
N-1665-511-3	MODIFICATION OF 14,376 GALLON STAINLESS STEEL WINE STORAGE TANK (TANK B142) WITH PRESSURE/VACUUM VALVE LOCATED INSIDE A CLIMATE CONTROLLED BUILDING: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513
N-1665-512-3	MODIFICATION OF 7,290 GALLON STAINLESS STEEL WINE STORAGE TANK (TANK B71) WITH PRESSURE/VACUUM VALVE LOCATED INSIDE A CLIMATE CONTROLLED BUILDING: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513
N-1665-513-3	MODIFICATION OF 7,290 GALLON STAINLESS STEEL WINE STORAGE TANK (TANK B72) WITH PRESSURE/VACUUM VALVE LOCATED INSIDE A CLIMATE CONTROLLED BUILDING: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513

Post Project Equipment Description:
The equipment description will be same as pre-project equipment description.

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 tanks are equipped with pressure/vacuum valves to reduce release of VOCs by requiring the maximum amount of variation in tank pressure before allowing the tank to vent to the atmosphere or allowing air admission to the tank. Further, these tanks are insulated or located inside a climate controlled building that would help in minimizing VOCs from the breathing losses.

VII. General Calculations

A. Assumptions

- Assumptions will be stated as they are made for this project.

B. Emission Factors

1. Pre-Project Emission Factors (EF1)

Operation	EF1 (lb-VOC/1,000 gal of wine)		Source
	Daily	Annual	
Wine storage (Red/White)	0.223	0.128	District FYI -114 (6/13/12) – See **Appendix H**

2. Post-Project Emission Factors (EF2)

EF2 will be same as EF1.

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Permit #	PE1 (lb-VOC/day)	PE1 (lb-VOC/yr)	PE1 (Total) (lb-VOC/yr)
N-1665-497-3 to '-506-3 (each)*	3.3	54	540
N-1665-508-2 & '-509-2 (each)**	5.3	30	60
N-1665-510-2 & '-511-2 (each)**	3.2	30	60
N-1665-512-2 & '-513-2 (each)**	1.6	30	60
		Total:	720

*PEs are taken from the application review under project N-1122878; **PEs are taken from the application review under project N-1122927

2. Post Project Potential to Emit (PE2)

The applicant has proposed to establish a combined VOC emissions limit of 720 lb/year for the permits under this project.

Permit #	PE2 (lb-VOC/day)	PE2 (lb-VOC/yr)
N-1665-497-4 to '-506-4 (each)	3.3	720
N-1665-508-3 & '-509-3 (each)	5.3	
N-1665-510-3 & '-511-3 (each)	3.2	
N-1665-512-3 & '-513-3 (each)	1.6	

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

Pursuant to District Rule 2201, the SSPE1 is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of Emission Reduction Credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions (AER) that have occurred at the source, and which have not been used on-site. SSPE1 is calculated using information under projects N-1141841 and N-1143217.

SSPE1 (lb/year)					
Category	**NO_X**	**SO_X**	**PM_{10}**	**CO**	**VOC**
SSPE1 for all permit units	3,407	708	1,615	21,515	661,757*
ERC	0	0	0	0	0
SSPE1	3,407	708	1,615	21,515	661,757

*661,922 lb-VOC/yr (from project N-1141841) - 863 lb-VOC/yr (pre-project from project N-1143217) + 698 lb-VOC/yr (post project from project N-1143217) = 661,757 lb-VOC/yr

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

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

SSPE2 (lb/year)					
Category	**NO_X**	**SO_X**	**PM_{10}**	**CO**	**VOC**
SSPE2 for all permit units	3,407	708	1,615	21,515	661,757
ERC	0	0	0	0	0
SSPE2	3,407	708	1,615	21,515	661,757

5. Major Source Determination

Rule 2201 Major Source Determination:

Pursuant to District Rule 2201, a Major Source is a stationary source with a SSPE2 equal to or exceeding one or more of the following threshold values. For the purposes of determining major source status the following shall not be included:

- any ERCs associated with the stationary source
- Emissions from non-road IC engines (i.e. IC engines at a particular site at the facility for less than 12 months)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 51.165

Rule 2201 Major Source Determination (lb/year)						
Category	NO_X	SO_X	PM_{10}	$*PM_{2.5}$	CO	VOC
SSPE1	3,407	708	1,615	1,615	21,515	661,757
SSPE2	3,407	708	1,615	1,615	21,515	661,757
Major Source Threshold	20,000	140,000	140,000	140,000	200,000	20,000
Major Source?	No	No	No	No	No	Yes

*$PM_{2.5}$ is assumed equal to PM_{10}

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:

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(iii). Therefore, the PSD Major Source threshold is 250 tpy for any regulated NSR pollutant.

PSD Major Source Determination (tons/year)						
Category	NO_2	VOC	SO_2	CO	PM	PM_{10}
Estimated Facility PE before Project Increase	1.7	330.9	0.4	10.8	0.8	0.8
PSD Major Source Thresholds	250	250	250	250	250	250
PSD Major Source?	No	Yes	No	No	No	No

As shown above, the facility is an existing PSD major source.

6. Baseline Emissions (BE)

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

Pursuant to District Rule 2201, BE = PE1 for:

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

Otherwise,

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

This facility is a Major Source for VOC. Each wine storage tank is a clean emission unit as each tank meets the requirements for achieved-in-practice BACT as accepted by the District during the five years immediately prior to the submission of the complete application; therefore, BE is equal to PE1 for each tank.

BE = PE1 for each tank.

7. SB 288 Major Modification

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

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

SB 288 Major Modification Thresholds			
Pollutant	**Project PE2 (lb/year)**	**Threshold (lb/year)**	**SB 288 Major Modification Calculation Required?**
NO_x	0	50,000	No
SO_x	0	80,000	No
PM_{10}	0	30,000	No
VOC	720	50,000	No

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

8. Federal Major Modification

District Rule 2201 states that a Federal Major Modification is the same as a "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA.

The determination of Federal Major Modification is based on a two-step test. For the first step, only the emission *increases* are counted. Emission decreases may not cancel out the increases for this determination.

Step 1

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

Emission Increase = PAE – BAE - UBC

Where: PAE = Projected Actual Emissions, and
BAE = Baseline Actual Emissions
UBC = Unused baseline capacity

The project's combined total emission increases are calculated in **Appendix G** and compared to the Federal Major Modification Thresholds in the following table.

Federal Major Modification Thresholds for Emission Increases			
Pollutant	**Total Emissions Increases (lb/yr)**	**Thresholds (lb/yr)**	**Federal Major Modification?**
NO_x*	0	0	No
VOC*	474	0	Yes
PM_{10}	0	30,000	No
$PM_{2.5}$	0	20,000	No
SO_x	0	80,000	No

*If there is any emission increases in NO_x or VOC, this project is a Federal Major Modification and no further analysis is required.

Since there is an increase in VOC emissions, this project constitutes a Federal Major Modification. Federal Offset quantities are calculated below.

Federal Offset Quantities:

The Federal offset quantity is only calculated only for the pollutants for which the project is a Federal Major Modification. The Federal offset quantity is the sum of the annual emission changes for all new and modified emission units in a project calculated as the potential to emit after the modification (PE2) minus the actual emissions (AE) during the baseline period for each emission unit times the applicable federal offset ratio. There are no special calculations performed for units covered by an SLC.

Pollutant: VOC		**Federal Offset Ratio:**	**1.5**
Permit #	**Total Actual Emissions (lb/year)**	**Potential Emissions (lb/year)**	**Emissions Change (lb/yr)**
N-1665-497-4 to '-506-4 and '-508-3 through '-513-3	246	720	474
		Net Emission Change (NEC) (lb/year):	474
		Federal Offset Quantity: (NEC * 1.5):	711

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

Rule 2410 applies to any pollutant regulated under the Clean Air Act, except those for which the District has been classified nonattainment. The pollutants which must be addressed in the PSD applicability determination for sources located in the SJV and discussed in this project are: (See 52.21 (b) (23) definition of significant)

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

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 PSD Major Source. Because the project is not located within 10 km (6.2 miles) 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. Project Emission Increase – Significance Determination

a. Evaluation of Calculated Post-project Potential to Emit for New or Modified Emissions Units vs PSD Significant Emission Increase Thresholds

As a screening tool, the post-project potential to emit from all new and modified units is compared to the PSD significant emission increase thresholds, and if the total potentials to emit from all new and modified units are below the applicable thresholds, no futher PSD analysis is needed.

PSD Significant Emission Increase Determination: Potential to Emit (tons/year)					
Category	**NO_2**	**SO_2**	**CO**	**PM**	**PM_{10}**
Total PE from New and Modified Units	0	0	0	0	0
PSD Significant Emission Increase Thresholds	40	40	100	25	15
PSD Significant Emission Increase?	N	N	N	N	N

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

10. Quarterly Net Emissions Change (QNEC)

The QNEC is calculated solely to establish emissions that are used to complete the District's PAS emissions profile screen. Detailed QNEC calculations are included in **Appendix E**.

VIII. Compliance Determination

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

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

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

*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 proposed project does not involve any new emissions units. Therefore, BACT for new units with PE > 2 lb/day purposes is not triggered.

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

There are no emissions units being relocated from one stationary source to another; therefore BACT is not triggered.

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

AIPE = PE2 – HAPE

Where,

AIPE = Adjusted Increase in Permitted Emissions, (lb/day)
PE2 = Post-Project Potential to Emit, (lb/day)
HAPE = Historically Adjusted Potential to Emit, (lb/day)

HAPE = PE1 x (EF2/EF1)

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

AIPE = PE2 – (PE1 * (EF2 / EF1))

N-1665-497-4 to '-506-4, '-508-3 to '-513-3
For each tank,

PE2 = PE1 and EF2 = EF1, therefore, AIPE will be zero for VOC emissions

Since AIPE is not greater than 2.0 lb/day for VOC, BACT is not triggered for each tank for VOC emissions.

d. SB 288/Federal Major Modification

Per section VII.C.8 of this document, the proposed project is a Federal Major Modification. The net emissions increase for each tank is more than 0 lb/yr (i.e. above the deminimus threshold of 185 lb/yr). Consequently, each tank triggers BACT for VOC emissions.

2. BACT Guideline

BACT guideline 5.4.13, Wine Storage Tank – Non-Wood Material, is referenced to address the BACT requirements. (See **Appendix C**)

3. Top-Down BACT Analysis

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

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

VOC: Insulation, pressure-vacuum relief valve set within 10% of the maximum allowable working pressure of the tank; gas tight tank operation; and continuous storage temperature not exceeding 75°F, achieved within 60 days of completion of fermentation

Each wine storage tank is insulated and is equipped with a pressure/vacuum (PV) relief valve. PV relief valve is required to be set within 10% of the maximum allowable working pressure of the tank. Further, the tank is required to be operated in a gas-tight condition. The wine temperature is required to be maintained at or below 75°F within 60 days of the completion of the fermentation cycle. Therefore, the wine storage tanks meet the BACT requirements for this class and category of operation and no further discussion is required.

The following condition ensures on-going compliance with the above BACT requirements:

- This tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694]

- The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694]

- The temperature of the wine stored in this tank shall be maintained at or below 75°F. 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°F or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75°F or less was achieved. [District Rules 2201 and 4694]

B. Offsets

1. Offset Applicability

Offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the SSPE2 equals to or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

The SSPE2 is compared to the offset thresholds in the following table.

Offset Determination (lb/year)					
Category	**NO_X**	**SO_X**	**PM_{10}**	**CO**	**VOC**
SSPE2	3,407	708	1,615	21,515	661,757
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	No	No	No	No	Yes

2. Quantity of Offsets Required

As seen above, the SSPE2 is greater than the offset thresholds for VOC emissions. Thus, offset calculations are required.
Section 4.7.1 of Rule 2201 states that for pollutants with SSPE1 greater than the emission offset threshold levels, emission offsets shall be provided for all increases in Stationary Source emissions, calculated as the differences of post-project Potential to Emit (PE2) and the Baseline Emissions (BE) of all new and modified emissions units, plus all increases in Cargo Carrier emissions. Thus,

Offsets Required (lb/year) = (Σ[PE2 – BE] + ICCE) x DOR, for all new or modified emissions units in the project,

Where,
PE2 = Post Project Potential to Emit, (lb/year)
BE = Baseline Emissions, (lb/year)
ICCE = Increase in Cargo Carrier Emissions, (lb/year)
DOR = Distance Offset Ratio, determined pursuant to Section 4.8

There is no increase in cargo carrier emissions from this project. Further, per section VII.C.6, BE is equal to PE1 for each emission unit. Thus,

Offsets Required (lb/year) = (Σ[PE2 – PE1]) x DOR
= 720 lb-VOC/yr – 720 lb-VOC/yr
= 0 lb-VOC/yr

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,
d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant, and/or
e. Any project which results in a Title V significant permit modification

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 does not constitute a Federal Major Modification; therefore, public noticing for Federal Major Modification purposes is required.

b. PE > 100 lb/day

Applications which include a new emissions unit with a PE greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. There are no new emissions units associated with this project. Therefore public noticing is not required for this project for PE > 100 lb/day.

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 Thresholds				
Pollutant	**SSPE1 (lb/year)**	**SSPE2 (lb/year)**	**Offset Threshold**	**Public Notice Required?**
NO_X	3,407	3,407	20,000 lb/year	No
SO_X	708	708	54,750 lb/year	No
PM_{10}	1,615	1,615	29,200 lb/year	No
CO	21,515	21,515	200,000 lb/year	No
VOC	661,757	661,757	20,000 lb/year	No

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

d. SSIPE > 20,000 lb/year

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

SSIPE Public Notice Thresholds					
Pollutant	**SSPE2 (lb/year)**	**SSPE1 (lb/year)**	**SSIPE (lb/year)**	**SSIPE Public Notice Threshold**	**Public Notice Required?**
NO_X	3,407	3,407	0	20,000 lb/year	No
SO_X	708	708	0	20,000 lb/year	No
PM_{10}	1,615	1,615	0	20,000 lb/year	No
CO	21,515	21,515	0	20,000 lb/year	No
VOC	661,757	661,757	0	20,000 lb/year	No

As demonstrated above, the SSIPE for each pollutant is less than 20,000 lb/year; therefore, public noticing for SSIPE purposes is not required.

e. Title V Significant Permit Modification

As shown in the Discussion of Rule 2520 below, this project constitutes a Title V significant modification. Therefore, public noticing for Title V significant modifications is required for this project.

2. Public Notice Action

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

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:
N-1665-497-3 to '-506-3:
The following conditions in each permit enforces the daily emissions:

- The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201]

- The maximum wine storage throughput in this tank shall not exceed 15,000 gallons per day. [District Rule 2201]

N-1665-508-2 & '-509-2:
The following conditions in each permit enforces the daily emissions:

- The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201]

- The maximum wine throughput in this tank shall not exceed 23,609 gallons per day. [District Rule 2201]

N-1665-510-2 & '-511-2:
The following conditions in each permit enforces the daily emissions:

- The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201]

- The maximum wine throughput in this tank shall not exceed 14,376 gallons per day. [District Rule 2201]

N-1665-512-2 & '-513-2:
The following conditions in each permit enforces the daily emissions:

- The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201]

- The maximum wine throughput in this tank shall not exceed 7,290 gallons per day. [District Rule 2201]

E. Compliance Assurance

1. Source Testing

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

2. Monitoring

The applicant is required to monitor the temperature of the wine stored in each tank at least once per week.

3. Recordkeeping

The facility will be required to keep daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, along with the records of total gallons of wine contained in a tank and temperature of the stored wine.

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

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

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

This project involves only VOCs (ethanol) for which AAQS does not exist; therefore, AAQA is not performed 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 Section VIII above, this project does constitute a Federal Major Modification, therefore this requirement is applicable. The compliance certification from the facility is included in **Appendix F** of this document.

H. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant proposes to modify the permits to establish a combined total annual VOC emission limit.

Since the project will not result in any physical changes to existing site, 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 on a much greater scale, and would therefore result in a much greater impact.

Rule 2410 Prevention of Significant Deterioration

As shown in Section VII.C.9 above, this project does not result in a new PSD major source or PSD major modification. 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. A significant permit modification is defined as a "permit amendment that does not qualify as a minor permit modification or administrative amendment." The proposed project is a Significant Modification to the Title V permit since this project triggers a Federal Major Modification under Rule 2201.

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. Therefore, compliance is expected with this rule. The following permit conditions will be included in each permit to ensure compliance with this rule:

- 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]

- 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]

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 4101 Visible Emissions

Rule 4101 states that no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 (or 20% opacity). Visible emissions are not expected from the wine handling operations; continued compliance is expected.

Rule 4102 Nuisance

Rule 4102 prohibits discharge of air contaminants which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, continued compliance with this rule is expected.

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 hazardous air pollutant (HAP) as defined by Section 44321 of the California Health and Safety Code. Therefore, health risk assessment is not necessary.

Compliance is expected.

Rule 4694 Wine Fermentation and Storage Tanks

The purpose of this rule is to reduce emissions of volatile organic compounds (VOC) from the fermentation and bulk storage of wine, or achieve equivalent reductions from alternative emission sources. This rule is applicable to all facilities with fermentation emissions in excess of 10 tons-VOC/year. The storage tank provisions of this rule apply to all tanks with capacity in excess of 5,000 gallons.

Section 5.1 requires the winery operator achieve Required Annual Emissions Reductions (RAER) equal to at least 35% of the winery's Baseline Fermentation Emissions (BFE). Since the tanks are being 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,
- The pressure-vacuum relief valve shall be permanently labeled with the operating pressure settings, and
- 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.

The following requirement(s) in each permit ensures on-going compliance with the above section(s):

- 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]

- 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]

Section 5.2.2 requires that the temperature of the stored wine be maintained at or below 75° F. The following requirement(s) in each permit ensures on-going compliance with the above section(s):

- The temperature of the wine stored in this tank shall be maintained at or below 75°F. 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°F or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75°F or less was achieved. [District Rule 2201 and 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.

Section 6.4.1 requires that records be kept for each fermentation batch. These tanks are not fermenters; therefore this section does not apply.

Section 6.4.2 requires that weekly records be kept of wine volume and temperature in each storage tank.

The following requirement(s) in each permit ensures on-going compliance with the above section(s):

- The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694]

- 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 2201 and 4694]

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

Section 6.4.3 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. The requirement is for operators mitigating fermentation emissions. The tanks are being used for wine storage operations. Therefore, this section is not applicable to these tanks.

Compliance is expected with this rule.

California Health & Safety Code 42301.6 (School Notice)

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

California Environmental Quality Act (CEQA)

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

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities;
- Identify the ways that environmental damage can be avoided or significantly reduced;

- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

Greenhouse Gas (GHG) Significance Determination

It is determined that no other agency has or will prepare an environmental review document for the project. Thus, the District is the Lead Agency for this project.

The project would not result in an increase in project specific greenhouse gas emissions. The District therefore concludes that the project would have a less than cumulatively significant impact on global climate change.

District CEQA Findings

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. Therefore, the District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15301 (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)).

Indemnification Agreement/Letter of Credit Determination

According to District Policy APR 2010 (CEQA Implementation Policy), when the District is the Lead or Responsible Agency for CEQA purposes, an indemnification agreement and/or a letter of credit may be required. The decision to require an indemnity agreement and/or a letter of credit is based on a case-by-case analysis of a particular project's potential for litigation risk, which in turn may be based on a project's potential to generate public concern, its potential for significant impacts, and the project proponent's ability to pay for the costs of litigation without a letter of credit, among other factors.

The criteria pollutant emissions and toxic air contaminant emissions associated with the proposed project are not significant, and there is minimal potential for public concern for this particular type of facility/operation. Therefore, an Indemnification Agreement and/or a Letter of Credit will not be required for this project in the absence of expressed public concern.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue ATCs subject to the permit conditions on the attached draft ATCs in **Appendix A**.

X. Billing Information

Annual Permit Fees			
Permit Number	**Fee Schedule**	**Fee Description**	**Annual Fee**
N-1665-497-4 to '-506-4	3020-05-B	14,218 gallons	$103.00
N-1665-508-3 & '-509-3	3020-05-C	23,609 gallons	$149.00
N-1665-510-3 & '-511-3	3020-05-B	14,376 gallons	$103.00
N-1665-512-3 & '-513-3	3020-05-B	7,290 gallons	$103.00

Appendixes

A: Draft ATCs
B: Current PTOs
C: BACT Guideline
D: BACT Analysis
E: Quarterly Net Emissions Change
F: Compliance Certification
G: Baseline Actual Emissions Calculations – TANKS 4.0 Reports
H: FYI - 114

Appendix A
Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: N-1665-497-4

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: BRONCO WINE COMPANY
MAILING ADDRESS: PO BOX 789 - ATTN: ENV COMPLIANCE
CERES, CA 95307

LOCATION: 6342 BYSTRUM RD
CERES, CA 95307

EQUIPMENT DESCRIPTION:
MODIFICATION OF 14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1410) WITH PRESSURE/VACUUM VALVE: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513

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 tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
4. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services

N-1665-497-4 Feb 9 2018 8:24AM KAHLONJ Joint Inspection NOT Required

5. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
6. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The maximum wine storage throughput in this tank shall not exceed 15,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513, calculated on a twelve month rolling basis, shall not exceed 720 pounds per year. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 shall be determined as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The annual VOC wine storage emission factor (EF) for each wine transfer shall be selected from the following emission factors based on the ethanol content of the wine transferred: For wine with ethanol content less than 8 volume percent: EF = 0.067 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 8 and less than 10 volume percent, EF = 0.088 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 10 and less than 12 volume percent, EF = 0.112 lb-VOC/1,000 gallons of wine throughput; and for wine with ethanol content equal to 12 and less than or equal to 14 volume percent, EF = 0.128 lb-VOC/1,000 gallons of wine throughput. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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
12. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
13. The operator shall maintain records of the calculated 12 month rolling total VOC emissions from the wine storage tanks under permits N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 (lb per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
14. 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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: N-1665-498-4

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: BRONCO WINE COMPANY
MAILING ADDRESS: PO BOX 789 - ATTN: ENV COMPLIANCE
CERES, CA 95307

LOCATION: 6342 BYSTRUM RD
CERES, CA 95307

EQUIPMENT DESCRIPTION:
MODIFICATION OF 14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1411) WITH PRESSURE/VACUUM VALVE: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513

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 tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
4. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

DRAFT

Arnaud Marjollet, Director of Permit Services

N-1665-498-4 Feb 9 2018 8:24AM – KAHLONJ Joint Inspection NOT Required

5. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
6. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The maximum wine storage throughput in this tank shall not exceed 15,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513, calculated on a twelve month rolling basis, shall not exceed 720 pounds per year. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 shall be determined as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The annual VOC wine storage emission factor (EF) for each wine transfer shall be selected from the following emission factors based on the ethanol content of the wine transferred: For wine with ethanol content less than 8 volume percent: EF = 0.067 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 8 and less than 10 volume percent, EF = 0.088 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 10 and less than 12 volume percent, EF = 0.112 lb-VOC/1,000 gallons of wine throughput; and for wine with ethanol content equal to 12 and less than or equal to 14 volume percent, EF = 0.128 lb-VOC/1,000 gallons of wine throughput. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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
12. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
13. The operator shall maintain records of the calculated 12 month rolling total VOC emissions from the wine storage tanks under permits N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 (lb per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
14. 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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: N-1665-499-4 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: BRONCO WINE COMPANY
MAILING ADDRESS: PO BOX 789 - ATTN: ENV COMPLIANCE
CERES, CA 95307

LOCATION: 6342 BYSTRUM RD
CERES, CA 95307

EQUIPMENT DESCRIPTION:
MODIFICATION OF 14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1412) WITH A PRESSURE/VACUUM VALVE: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513

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 tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
4. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

DRAFT

Arnaud Marjollet, Director of Permit Services

N-1665-499-4 Feb 9 2010 9:24AM – KAHLONJ Joint Inspection NOT Required

5. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
6. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The maximum wine storage throughput in this tank shall not exceed 15,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513, calculated on a twelve month rolling basis, shall not exceed 720 pounds per year. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 shall be determined as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The annual VOC wine storage emission factor (EF) for each wine transfer shall be selected from the following emission factors based on the ethanol content of the wine transferred: For wine with ethanol content less than 8 volume percent: EF = 0.067 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 8 and less than 10 volume percent, EF = 0.088 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 10 and less than 12 volume percent, EF = 0.112 lb-VOC/1,000 gallons of wine throughput; and for wine with ethanol content equal to 12 and less than or equal to 14 volume percent, EF = 0.128 lb-VOC/1,000 gallons of wine throughput. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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
12. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
13. The operator shall maintain records of the calculated 12 month rolling total VOC emissions from the wine storage tanks under permits N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 (lb per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
14. 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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: N-1665-500-4

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: BRONCO WINE COMPANY
MAILING ADDRESS: PO BOX 789 - ATTN: ENV COMPLIANCE
CERES, CA 95307

LOCATION: 6342 BYSTRUM RD
CERES, CA 95307

EQUIPMENT DESCRIPTION:
MODIFICATION OF 14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1413) WITH A PRESSURE/VACUUM VALVE: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513

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 tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
4. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

DRAFT

Arnaud Marjollet, Director of Permit Services

N-1665-500-4 Feb 9 2018 9:24AM -- KAHLONJ Joint Inspection NOT Required

5. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit

6. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit

7. The maximum wine storage throughput in this tank shall not exceed 15,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513, calculated on a twelve month rolling basis, shall not exceed 720 pounds per year. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 shall be determined as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

10. The annual VOC wine storage emission factor (EF) for each wine transfer shall be selected from the following emission factors based on the ethanol content of the wine transferred: For wine with ethanol content less than 8 volume percent: EF = 0.067 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 8 and less than 10 volume percent, EF = 0.088 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 10 and less than 12 volume percent, EF = 0.112 lb-VOC/1,000 gallons of wine throughput; and for wine with ethanol content equal to 12 and less than or equal to 14 volume percent, EF = 0.128 lb-VOC/1,000 gallons of wine throughput. [District Rule 2201] Federally Enforceable Through Title V Permit

11. 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

12. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

13. The operator shall maintain records of the calculated 12 month rolling total VOC emissions from the wine storage tanks under permits N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 (lb per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit

14. 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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: N-1665-501-4

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: BRONCO WINE COMPANY
MAILING ADDRESS: PO BOX 789 - ATTN: ENV COMPLIANCE
CERES, CA 95307

LOCATION: 6342 BYSTRUM RD
CERES, CA 95307

EQUIPMENT DESCRIPTION:
MODIFICATION OF 14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1414) WITH PRESSURE/VACUUM VALVE: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513

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 tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
4. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

DRAFT

Arnaud Marjollet, Director of Permit Services

N-1665-501-4 : Feb 9 2018 9:24AM -- KAHLGNJ : Joint Inspection NOT Required

5. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
6. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The maximum wine storage throughput in this tank shall not exceed 15,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513, calculated on a twelve month rolling basis, shall not exceed 720 pounds per year. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 shall be determined as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The annual VOC wine storage emission factor (EF) for each wine transfer shall be selected from the following emission factors based on the ethanol content of the wine transferred: For wine with ethanol content less than 8 volume percent: EF = 0.067 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 8 and less than 10 volume percent, EF = 0.088 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 10 and less than 12 volume percent, EF = 0.112 lb-VOC/1,000 gallons of wine throughput; and for wine with ethanol content equal to 12 and less than or equal to 14 volume percent, EF = 0.128 lb-VOC/1,000 gallons of wine throughput. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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
12. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
13. The operator shall maintain records of the calculated 12 month rolling total VOC emissions from the wine storage tanks under permits N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 (lb per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
14. 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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: N-1665-502-4

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: BRONCO WINE COMPANY
MAILING ADDRESS: PO BOX 789 - ATTN: ENV COMPLIANCE
CERES, CA 95307

LOCATION: 6342 BYSTRUM RD
CERES, CA 95307

EQUIPMENT DESCRIPTION:
MODIFICATION OF 14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1415) WITH PRESSURE/VACUUM VALVE: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513

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 tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
4. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services

N-1665-502-4 Feb 9 2016 8:24AM -- KAHLONJ Joint Inspection NOT Required

5. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
6. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The maximum wine storage throughput in this tank shall not exceed 15,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513, calculated on a twelve month rolling basis, shall not exceed 720 pounds per year. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 shall be determined as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The annual VOC wine storage emission factor (EF) for each wine transfer shall be selected from the following emission factors based on the ethanol content of the wine transferred: For wine with ethanol content less than 8 volume percent: EF = 0.067 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 8 and less than 10 volume percent, EF = 0.088 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 10 and less than 12 volume percent, EF = 0.112 lb-VOC/1,000 gallons of wine throughput; and for wine with ethanol content equal to 12 and less than or equal to 14 volume percent, EF = 0.128 lb-VOC/1,000 gallons of wine throughput. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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
12. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
13. The operator shall maintain records of the calculated 12 month rolling total VOC emissions from the wine storage tanks under permits N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 (lb per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
14. 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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: N-1665-503-4

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: BRONCO WINE COMPANY
MAILING ADDRESS: PO BOX 789 - ATTN: ENV COMPLIANCE
CERES, CA 95307

LOCATION: 6342 BYSTRUM RD
CERES, CA 95307

EQUIPMENT DESCRIPTION:
MODIFICATION OF 14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1416) WITH PRESSURE/VACUUM VALVE: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513

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 tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
4. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services

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

5. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
6. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The maximum wine storage throughput in this tank shall not exceed 15,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513, calculated on a twelve month rolling basis, shall not exceed 720 pounds per year. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 shall be determined as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The annual VOC wine storage emission factor (EF) for each wine transfer shall be selected from the following emission factors based on the ethanol content of the wine transferred: For wine with ethanol content less than 8 volume percent: EF = 0.067 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 8 and less than 10 volume percent, EF = 0.088 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 10 and less than 12 volume percent, EF = 0.112 lb-VOC/1,000 gallons of wine throughput; and for wine with ethanol content equal to 12 and less than or equal to 14 volume percent, EF = 0.128 lb-VOC/1,000 gallons of wine throughput. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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
12. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
13. The operator shall maintain records of the calculated 12 month rolling total VOC emissions from the wine storage tanks under permits N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 (lb per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
14. 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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: N-1665-504-4

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: BRONCO WINE COMPANY
MAILING ADDRESS: PO BOX 789 - ATTN: ENV COMPLIANCE
CERES, CA 95307

LOCATION: 6342 BYSTRUM RD
CERES, CA 95307

EQUIPMENT DESCRIPTION:
MODIFICATION OF 14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1417) WITH A PRESSURE/VACUUM VALVE: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513

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 tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
4. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services
N-1665-504-4 Feb 9 2018 9:24AM – KAHLONJ Joint Inspection NOT Required

5. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
6. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The maximum wine storage throughput in this tank shall not exceed 15,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513, calculated on a twelve month rolling basis, shall not exceed 720 pounds per year. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 shall be determined as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The annual VOC wine storage emission factor (EF) for each wine transfer shall be selected from the following emission factors based on the ethanol content of the wine transferred: For wine with ethanol content less than 8 volume percent: EF = 0.067 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 8 and less than 10 volume percent, EF = 0.088 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 10 and less than 12 volume percent, EF = 0.112 lb-VOC/1,000 gallons of wine throughput; and for wine with ethanol content equal to 12 and less than or equal to 14 volume percent, EF = 0.128 lb-VOC/1,000 gallons of wine throughput. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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
12. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
13. The operator shall maintain records of the calculated 12 month rolling total VOC emissions from the wine storage tanks under permits N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 (lb per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
14. 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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: N-1665-505-4

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: BRONCO WINE COMPANY
MAILING ADDRESS: PO BOX 789 - ATTN: ENV COMPLIANCE
CERES, CA 95307

LOCATION: 6342 BYSTRUM RD
CERES, CA 95307

EQUIPMENT DESCRIPTION:
MODIFICATION OF 14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1418) WITH A PRESSURE/VACUUM VALVE: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513

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 tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
4. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services

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

5. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
6. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The maximum wine storage throughput in this tank shall not exceed 15,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513, calculated on a twelve month rolling basis, shall not exceed 720 pounds per year. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 shall be determined as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The annual VOC wine storage emission factor (EF) for each wine transfer shall be selected from the following emission factors based on the ethanol content of the wine transferred: For wine with ethanol content less than 8 volume percent: EF = 0.067 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 8 and less than 10 volume percent, EF = 0.088 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 10 and less than 12 volume percent, EF = 0.112 lb-VOC/1,000 gallons of wine throughput; and for wine with ethanol content equal to 12 and less than or equal to 14 volume percent, EF = 0.128 lb-VOC/1,000 gallons of wine throughput. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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
12. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
13. The operator shall maintain records of the calculated 12 month rolling total VOC emissions from the wine storage tanks under permits N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 (lb per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
14. 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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: N-1665-506-4

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: BRONCO WINE COMPANY
MAILING ADDRESS: PO BOX 789 - ATTN: ENV COMPLIANCE
CERES, CA 95307

LOCATION: 6342 BYSTRUM RD
CERES, CA 95307

EQUIPMENT DESCRIPTION:
MODIFICATION OF 14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1419) WITH A PRESSURE/VACUUM VALVE: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513

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 tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
4. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

DRAFT

Arnaud Marjollet, Director of Permit Services
N-1665-506-4 : Feb 9 2018 9:24AM -- KAHLONJ : Joint Inspection NOT Required

5. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
6. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The maximum wine storage throughput in this tank shall not exceed 15,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513, calculated on a twelve month rolling basis, shall not exceed 720 pounds per year. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 shall be determined as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The annual VOC wine storage emission factor (EF) for each wine transfer shall be selected from the following emission factors based on the ethanol content of the wine transferred: For wine with ethanol content less than 8 volume percent: EF = 0.067 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 8 and less than 10 volume percent, EF = 0.088 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 10 and less than 12 volume percent, EF = 0.112 lb-VOC/1,000 gallons of wine throughput; and for wine with ethanol content equal to 12 and less than or equal to 14 volume percent, EF = 0.128 lb-VOC/1,000 gallons of wine throughput. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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
12. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
13. The operator shall maintain records of the calculated 12 month rolling total VOC emissions from the wine storage tanks under permits N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 (lb per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
14. 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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: N-1665-508-3

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: BRONCO WINE COMPANY
MAILING ADDRESS: PO BOX 789 - ATTN: ENV COMPLIANCE
CERES, CA 95307

LOCATION: 6342 BYSTRUM RD
CERES, CA 95307

EQUIPMENT DESCRIPTION:
MODIFICATION OF 23,609 GALLON STAINLESS STEEL WINE STORAGE TANK (TANK B231) WITH PRESSURE/VACUUM VALVE LOCATED INSIDE A CLIMATE CONTROLLED BUILDING: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513

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 tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
4. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

DRAFT

Arnaud Marjollet, Director of Permit Services

N-1665-508-3 Feb 9 2018 9:24AM -- KAHLONJ Joint Inspection NOT Required

5. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
6. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The maximum wine storage throughput in this tank shall not exceed 23,609 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513, calculated on a twelve month rolling basis, shall not exceed 720 pounds per year. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 shall be determined as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The annual VOC wine storage emission factor (EF) for each wine transfer shall be selected from the following emission factors based on the ethanol content of the wine transferred: For wine with ethanol content less than 8 volume percent: EF = 0.067 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 8 and less than 10 volume percent, EF = 0.088 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 10 and less than 12 volume percent, EF = 0.112 lb-VOC/1,000 gallons of wine throughput; and for wine with ethanol content equal to 12 and less than or equal to 14 volume percent, EF = 0.128 lb-VOC/1,000 gallons of wine throughput. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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
12. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
13. The operator shall maintain records of the calculated 12 month rolling total VOC emissions from the wine storage tanks under permits N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 (lb per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
14. 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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: N-1665-509-3

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: BRONCO WINE COMPANY
MAILING ADDRESS: PO BOX 789 - ATTN: ENV COMPLIANCE
CERES, CA 95307

LOCATION: 6342 BYSTRUM RD
CERES, CA 95307

EQUIPMENT DESCRIPTION:
MODIFICATION OF 23,609 GALLON STAINLESS STEEL WINE STORAGE TANK (TANK B232) WITH PRESSURE/VACUUM VALVE LOCATED INSIDE A CLIMATE CONTROLLED BUILDING: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513

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 tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
4. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

DRAFT

Arnaud Marjollet, Director of Permit Services

N-1665-509-3 Feb 9 2018 9:24AM -- KAHLONJ Joint Inspection NOT Required

5. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
6. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The maximum wine storage throughput in this tank shall not exceed 23,609 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513, calculated on a twelve month rolling basis, shall not exceed 720 pounds per year. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 shall be determined as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The annual VOC wine storage emission factor (EF) for each wine transfer shall be selected from the following emission factors based on the ethanol content of the wine transferred: For wine with ethanol content less than 8 volume percent: EF = 0.067 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 8 and less than 10 volume percent, EF = 0.088 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 10 and less than 12 volume percent, EF = 0.112 lb-VOC/1,000 gallons of wine throughput; and for wine with ethanol content equal to 12 and less than or equal to 14 volume percent, EF = 0.128 lb-VOC/1,000 gallons of wine throughput. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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
12. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
13. The operator shall maintain records of the calculated 12 month rolling total VOC emissions from the wine storage tanks under permits N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 (lb per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
14. 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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: N-1665-510-3

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: BRONCO WINE COMPANY
MAILING ADDRESS: PO BOX 789 - ATTN: ENV COMPLIANCE
CERES, CA 95307

LOCATION: 6342 BYSTRUM RD
CERES, CA 95307

EQUIPMENT DESCRIPTION:
MODIFICATION OF 14,376 GALLON STAINLESS STEEL WINE STORAGE TANK (TANK B141) WITH PRESSURE/VACUUM VALVE LOCATED INSIDE A CLIMATE CONTROLLED BUILDING: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513

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 tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
4. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

DRAFT

Arnaud Marjollet, Director of Permit Services

N-1665-510-3 Feb 9 2018 9:24AM -- KAHLONJ Joint Inspection NOT Required

5. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
6. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The maximum wine storage throughput in this tank shall not exceed 14,376 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513, calculated on a twelve month rolling basis, shall not exceed 720 pounds per year. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 shall be determined as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The annual VOC wine storage emission factor (EF) for each wine transfer shall be selected from the following emission factors based on the ethanol content of the wine transferred: For wine with ethanol content less than 8 volume percent: EF = 0.067 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 8 and less than 10 volume percent, EF = 0.088 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 10 and less than 12 volume percent, EF = 0.112 lb-VOC/1,000 gallons of wine throughput; and for wine with ethanol content equal to 12 and less than or equal to 14 volume percent, EF = 0.128 lb-VOC/1,000 gallons of wine throughput. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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
12. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
13. The operator shall maintain records of the calculated 12 month rolling total VOC emissions from the wine storage tanks under permits N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 (lb per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
14. 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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: N-1665-511-3

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: BRONCO WINE COMPANY
MAILING ADDRESS: PO BOX 789 - ATTN: ENV COMPLIANCE
CERES, CA 95307

LOCATION: 6342 BYSTRUM RD
CERES, CA 95307

EQUIPMENT DESCRIPTION:
MODIFICATION OF 14,376 GALLON STAINLESS STEEL WINE STORAGE TANK (TANK B142) WITH PRESSURE/VACUUM VALVE LOCATED INSIDE A CLIMATE CONTROLLED BUILDING: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513

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 tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
4. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

DRAFT

Arnaud Marjollet, Director of Permit Services

N-1665-511-3 Feb 9 2016 9:24AM -- KAHLONJ Joint Inspection NOT Required

5. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
6. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The maximum wine storage throughput in this tank shall not exceed 14,376 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513, calculated on a twelve month rolling basis, shall not exceed 720 pounds per year. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 shall be determined as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The annual VOC wine storage emission factor (EF) for each wine transfer shall be selected from the following emission factors based on the ethanol content of the wine transferred: For wine with ethanol content less than 8 volume percent: EF = 0.067 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 8 and less than 10 volume percent, EF = 0.088 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 10 and less than 12 volume percent, EF = 0.112 lb-VOC/1,000 gallons of wine throughput; and for wine with ethanol content equal to 12 and less than or equal to 14 volume percent, EF = 0.128 lb-VOC/1,000 gallons of wine throughput. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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
12. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
13. The operator shall maintain records of the calculated 12 month rolling total VOC emissions from the wine storage tanks under permits N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 (lb per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
14. 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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: N-1665-512-3

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: BRONCO WINE COMPANY
MAILING ADDRESS: PO BOX 789 - ATTN: ENV COMPLIANCE
CERES, CA 95307

LOCATION: 6342 BYSTRUM RD
CERES, CA 95307

EQUIPMENT DESCRIPTION:
MODIFICATION OF 7,290 GALLON STAINLESS STEEL WINE STORAGE TANK (TANK B71) WITH PRESSURE/VACUUM VALVE LOCATED INSIDE A CLIMATE CONTROLLED BUILDING: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513

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 tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
4. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

DRAFT

Arnaud Marjollet, Director of Permit Services

N-1665-512-3 Feb 9 2018 9:24AM – KAHLONJ : Joint Inspection NOT Required

5. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
6. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The maximum wine storage throughput in this tank shall not exceed 7,290 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513, calculated on a twelve month rolling basis, shall not exceed 720 pounds per year. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 shall be determined as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The annual VOC wine storage emission factor (EF) for each wine transfer shall be selected from the following emission factors based on the ethanol content of the wine transferred: For wine with ethanol content less than 8 volume percent: EF = 0.067 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 8 and less than 10 volume percent, EF = 0.088 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 10 and less than 12 volume percent, EF = 0.112 lb-VOC/1,000 gallons of wine throughput; and for wine with ethanol content equal to 12 and less than or equal to 14 volume percent, EF = 0.128 lb-VOC/1,000 gallons of wine throughput. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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
12. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
13. The operator shall maintain records of the calculated 12 month rolling total VOC emissions from the wine storage tanks under permits N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 (lb per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
14. 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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: N-1665-513-3

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: BRONCO WINE COMPANY
MAILING ADDRESS: PO BOX 789 - ATTN: ENV COMPLIANCE
CERES, CA 95307

LOCATION: 6342 BYSTRUM RD
CERES, CA 95307

EQUIPMENT DESCRIPTION:
MODIFICATION OF 7,290 GALLON STAINLESS STEEL WINE STORAGE TANK (TANK B72) WITH PRESSURE/VACUUM VALVE LOCATED INSIDE A CLIMATE CONTROLLED BUILDING: REPLACE ANNUAL THROUGHPUT LIMIT WITH A COMBINED ANNUAL VOC EMISSION LIMIT FOR THE TANKS UNDER PERMITS N-1665-497 THROUGH '-506, '-508 THROUGH '-513

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 tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
4. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services

N-1665-513-3 Feb 9 2018 9:24AM -- KAHLONJ Joint Inspection NOT Required

5. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
6. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The maximum wine storage throughput in this tank shall not exceed 7,290 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513, calculated on a twelve month rolling basis, shall not exceed 720 pounds per year. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Combined annual VOC emissions from wine storage operations under permit units N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 shall be determined as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The annual VOC wine storage emission factor (EF) for each wine transfer shall be selected from the following emission factors based on the ethanol content of the wine transferred: For wine with ethanol content less than 8 volume percent: EF = 0.067 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 8 and less than 10 volume percent, EF = 0.088 lb-VOC/1,000 gallons of wine throughput; for wine with ethanol content equal to 10 and less than 12 volume percent, EF = 0.112 lb-VOC/1,000 gallons of wine throughput; and for wine with ethanol content equal to 12 and less than or equal to 14 volume percent, EF = 0.128 lb-VOC/1,000 gallons of wine throughput. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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
12. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
13. The operator shall maintain records of the calculated 12 month rolling total VOC emissions from the wine storage tanks under permits N-1665-497 through N-1665-506 and N-1665-508 through N-1665-513 (lb per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
14. 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

Appendix B
Current PTOs

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: N-1665-497-3 **EXPIRATION DATE:** 04/30/2018

EQUIPMENT DESCRIPTION:
14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1410) WITH PRESSURE/VACUUM VALVE

PERMIT UNIT REQUIREMENTS

1. This tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
2. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
3. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
4. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The maximum wine storage throughput in this tank shall not exceed 15,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 425,000 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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
8. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The operator shall maintain records of the calculated 12 month rolling wine throughput rate (gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
10. 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: N-1665-498-3 **EXPIRATION DATE:** 04/30/2018

EQUIPMENT DESCRIPTION:
14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1411) WITH PRESSURE/VACUUM VALVE

PERMIT UNIT REQUIREMENTS

1. This tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
2. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
3. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
4. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The maximum wine storage throughput in this tank shall not exceed 15,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 425,000 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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
8. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The operator shall maintain records of the calculated 12 month rolling wine throughput rate (gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
10. 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: N-1665-499-3 **EXPIRATION DATE:** 04/30/2018

EQUIPMENT DESCRIPTION:
14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1412) WITH A PRESSURE/VACUUM VALVE

PERMIT UNIT REQUIREMENTS

1. This tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
2. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
3. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
4. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The maximum wine storage throughput in this tank shall not exceed 15,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 425,000 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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
8. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The operator shall maintain records of the calculated 12 month rolling wine throughput rate (gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
10. 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: N-1665-500-3 **EXPIRATION DATE:** 04/30/2018

EQUIPMENT DESCRIPTION:
14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1413) WITH A PRESSURE/VACUUM VALVE

PERMIT UNIT REQUIREMENTS

1. This tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
2. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
3. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
4. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The maximum wine storage throughput in this tank shall not exceed 15,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 425,000 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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
8. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The operator shall maintain records of the calculated 12 month rolling wine throughput rate (gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
10. 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: N-1665-501-3 **EXPIRATION DATE:** 04/30/2018

EQUIPMENT DESCRIPTION:
14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1414) WITH PRESSURE/VACUUM VALVE

PERMIT UNIT REQUIREMENTS

1. This tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
2. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
3. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
4. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The maximum wine storage throughput in this tank shall not exceed 15,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 425,000 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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
8. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The operator shall maintain records of the calculated 12 month rolling wine throughput rate (gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
10. 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: N-1665-502-3 **EXPIRATION DATE:** 04/30/2018

EQUIPMENT DESCRIPTION:
14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1415) WITH PRESSURE/VACUUM VALVE

PERMIT UNIT REQUIREMENTS

1. This tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
2. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
3. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
4. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The maximum wine storage throughput in this tank shall not exceed 15,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 425,000 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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
8. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The operator shall maintain records of the calculated 12 month rolling wine throughput rate (gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
10. 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: N-1665-503-3 **EXPIRATION DATE:** 04/30/2018

EQUIPMENT DESCRIPTION:
14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1416) WITH PRESSURE/VACUUM VALVE

PERMIT UNIT REQUIREMENTS

1. This tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
2. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
3. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
4. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The maximum wine storage throughput in this tank shall not exceed 15,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 425,000 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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
8. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The operator shall maintain records of the calculated 12 month rolling wine throughput rate (gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
10. 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: N-1665-504-3 **EXPIRATION DATE:** 04/30/2018

EQUIPMENT DESCRIPTION:
14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1417) WITH A PRESSURE/VACUUM VALVE

PERMIT UNIT REQUIREMENTS

1. This tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
2. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
3. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
4. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The maximum wine storage throughput in this tank shall not exceed 15,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 425,000 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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
8. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The operator shall maintain records of the calculated 12 month rolling wine throughput rate (gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
10. 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: N-1665-505-3 **EXPIRATION DATE:** 04/30/2018

EQUIPMENT DESCRIPTION:
14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1418) WITH A PRESSURE/VACUUM VALVE

PERMIT UNIT REQUIREMENTS

1. This tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
2. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
3. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
4. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The maximum wine storage throughput in this tank shall not exceed 15,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 425,000 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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
8. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The operator shall maintain records of the calculated 12 month rolling wine throughput rate (gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
10. 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: N-1665-506-3 **EXPIRATION DATE:** 04/30/2018

EQUIPMENT DESCRIPTION:
14,218 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 1419) WITH A PRESSURE/VACUUM VALVE

PERMIT UNIT REQUIREMENTS

1. This tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
2. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
3. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
4. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The maximum wine storage throughput in this tank shall not exceed 15,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 425,000 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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
8. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The operator shall maintain records of the calculated 12 month rolling wine throughput rate (gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
10. 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: N-1665-508-2 **EXPIRATION DATE:** 04/30/2018

EQUIPMENT DESCRIPTION:
23,609 GALLON STAINLESS STEEL WINE STORAGE TANK (TANK B231) WITH PRESSURE/VACUUM VALVE LOCATED INSIDE A CLIMATE CONTROLLED BUILDING

PERMIT UNIT REQUIREMENTS

1. 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
2. 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
3. The temperature of the wine stored in this tank shall be maintained at or below 75°F. 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°F or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75°F or less was achieved. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
4. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The maximum wine throughput in this tank shall not exceed 23,609 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The maximum wine throughput in this tank, calculated on a 12 month rolling basis, shall not exceed 232,000 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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 2201 and 4694] Federally Enforceable Through Title V Permit
8. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The operator shall maintain records of the calculated 12 month rolling wine throughput rate (gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
10. 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: N-1665-509-2 **EXPIRATION DATE:** 04/30/2018

EQUIPMENT DESCRIPTION:
23,609 GALLON STAINLESS STEEL WINE STORAGE TANK (TANK B232) WITH PRESSURE/VACUUM VALVE LOCATED INSIDE A CLIMATE CONTROLLED BUILDING

PERMIT UNIT REQUIREMENTS

1. 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
2. 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
3. The temperature of the wine stored in this tank shall be maintained at or below 75°F. 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°F or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75°F or less was achieved. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
4. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The maximum wine throughput in this tank shall not exceed 23,609 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The maximum wine throughput in this tank, calculated on a 12 month rolling basis, shall not exceed 232,000 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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 2201 and 4694] Federally Enforceable Through Title V Permit
8. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The operator shall maintain records of the calculated 12 month rolling wine throughput rate (gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
10. 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: N-1665-510-2 **EXPIRATION DATE:** 04/30/2018

EQUIPMENT DESCRIPTION:
14,376 GALLON STAINLESS STEEL WINE STORAGE TANK (TANK B141) WITH PRESSURE/VACUUM VALVE LOCATED INSIDE A CLIMATE CONTROLLED BUILDING

PERMIT UNIT REQUIREMENTS

1. 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
2. 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
3. The temperature of the wine stored in this tank shall be maintained at or below 75°F. 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°F or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75°F or less was achieved. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
4. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The maximum wine throughput in this tank shall not exceed 14,376 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The maximum wine throughput in this tank, calculated on a 12 month rolling basis, shall not exceed 232,000 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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 2201 and 4694] Federally Enforceable Through Title V Permit
8. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The operator shall maintain records of the calculated 12 month rolling wine throughput rate (gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
10. 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: N-1665-511-2 **EXPIRATION DATE:** 04/30/2018

EQUIPMENT DESCRIPTION:
14,376 GALLON STAINLESS STEEL WINE STORAGE TANK (TANK B142) WITH PRESSURE/VACUUM VALVE LOCATED INSIDE A CLIMATE CONTROLLED BUILDING

PERMIT UNIT REQUIREMENTS

1. 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
2. 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
3. The temperature of the wine stored in this tank shall be maintained at or below 75°F. 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°F or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75°F or less was achieved. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
4. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The maximum wine throughput in this tank shall not exceed 14,376 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The maximum wine throughput in this tank, calculated on a 12 month rolling basis, shall not exceed 232,000 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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 2201 and 4694] Federally Enforceable Through Title V Permit
8. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The operator shall maintain records of the calculated 12 month rolling wine throughput rate (gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
10. 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: N-1665-512-2 **EXPIRATION DATE:** 04/30/2018

EQUIPMENT DESCRIPTION:
7,290 GALLON STAINLESS STEEL WINE STORAGE TANK (TANK B71) WITH PRESSURE/VACUUM VALVE LOCATED INSIDE A CLIMATE CONTROLLED BUILDING

PERMIT UNIT REQUIREMENTS

1. 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
2. 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
3. The temperature of the wine stored in this tank shall be maintained at or below 75°F. 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°F or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75°F or less was achieved. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
4. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The maximum wine throughput in this tank shall not exceed 7,290 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The maximum wine throughput in this tank, calculated on a 12 month rolling basis, shall not exceed 232,000 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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 2201 and 4694] Federally Enforceable Through Title V Permit
8. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The operator shall maintain records of the calculated 12 month rolling wine throughput rate (gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
10. 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: N-1665-513-2 **EXPIRATION DATE:** 04/30/2018

EQUIPMENT DESCRIPTION:
7,290 GALLON STAINLESS STEEL WINE STORAGE TANK (TANK B72) WITH PRESSURE/VACUUM VALVE LOCATED INSIDE A CLIMATE CONTROLLED BUILDING

PERMIT UNIT REQUIREMENTS

1. 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
2. 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
3. The temperature of the wine stored in this tank shall be maintained at or below 75°F. 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°F or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75°F or less was achieved. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
4. The ethanol content of wine stored in this tank shall not exceed 14.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The maximum wine throughput in this tank shall not exceed 7,290 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The maximum wine throughput in this tank, calculated on a 12 month rolling basis, shall not exceed 232,000 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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 2201 and 4694] Federally Enforceable Through Title V Permit
8. The operator shall record, on a daily basis, total gallons of wine contained in the tank. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The operator shall maintain records of the calculated 12 month rolling wine throughput rate (gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
10. 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

Appendix C
BACT Guideline

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 5.4.13*

Last Update: 09/26/2011

Wine Storage Tank - Non-Wood Material**

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)	

**This guideline is applicable to a wine storage tank that is not constructed out of wooden materials.
***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 ot diurnal temperature variations. Tanks made entirely of non-conducting materials such as concrete (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 s a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

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

Appendix D
BACT Analysis

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 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.

The SJVUAPCD BACT Clearinghouse guideline 5.4.13 identifies technologically feasible BACT for wine storage tanks as follows:

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 to diurnal temperature variations. Tanks made entirely of non-conducting materials such as concrete and wood (except for fittings) are considered self-insulating.*

SJVUAPCD BACT Clearinghouse guideline 5.4.13 does not identify any alternate basic equipment control alternatives.

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	Control	Overall Capture and Control Efficiency
1	Capture of VOCs and thermal oxidation or equivalent	88%(*)
2	Capture of VOCs and carbon adsorption or equivalent	86%
3	Capture of VOCs and absorption (scrubber) or equivalent	81%
4	Capture of VOCs and condensation or equivalent	81%
5	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	Baseline (Achieved-in-Practice)

* Capture efficiency (90%) x removal efficiency for control device.

Step 4 - Cost Effectiveness Analysis

A cost effective analysis must be performed for all control options that have not been determined to be achieved in practice in the list from Step 3 above, in the order of their ranking, to determine the cost effective option with the lowest emissions.

District BACT Policy APR 1305 establishes annual cost thresholds for imposed control based upon the amount of pollutants reduced by the controls. If the cost of control is at or below the threshold, it is considered a cost effective control. If the cost exceeds the threshold, it is not cost effective and the control is not required. Per District BACT Policy, the maximum cost limit for VOC reduction is $17,500 per ton of VOC emissions reduced.

Uncontrolled Storage Emissions
The total potential emissions from the tanks under this project would be 720 lb/yr. Thus,

Uncontrolled Storage PE = 720 lb-VOC/year

Total Annual Cost
Total Annual Cost = Cost of Control System + Annual Operating Cost + Ducting/Piping/CIP

The Total Annual Cost is the cumulative total of capital cost of control device, annual operating cost, plus the cost of ducting/piping/CIP. As a first step, if just using the partial cost of the ductwork plus CIP system is sufficient to show that the control option is not cost effective, additional cost may not be needed for the calculation purposes for this project.

Collection System Capital Investment (based on ductwork and clean-in-place system)
A common feature of all thermal oxidation/carbon adsorption/absorption or condensation options is that they require installation of a collection system for delivering the VOCs from the tanks to the common control device(s).

Basis of Cost Information:

- The costs for the ductwork and the required clean-in-place (CIP) system are based on information from the 2005 Eichleay Study. The 2005 Eichleay study was used in development of District Rule 4694 Wine Fermentation and Storage Tanks and includes substantial information on the costs and details of the potential application of VOC controls to wineries and addresses many of the technical issues of the general site specific factors for wineries.
- The District performed a cost survey of stainless steel ducting/piping and found that the values stated in the Eichleay report including the cost of inflation (applied as stated below) were less expensive; therefore, as a conservative estimate, the District will use the cost of ducting/piping from the Eichleay report which will include ducting, fittings, bolt up, handle, and install. A summary of the ducting/piping cost survey is included in Attachment C2.
- Eichleay's cost estimate for ducting included the duct, fittings, bolt up, handle and install; therefore, the District did not allow the additional costs for foundations &

supports, handling & erection, electrical, piping or painting, as allowed by the EPA Cost Manual.

- The collection system consists of stainless steel place ductwork (stainless steel is required due to food grade product status) with isolation valving, connecting the 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 be included in the cost estimate.
- A minimum duct size is established at six inches diameter at each tank to provide adequate strength for spanning between supports.
- One of the major concerns of a manifold duct system is microorganisms spoiling the product, and transferring from one tank to another. It is necessary to design into the system a positive disconnect of the ducting system when the tanks are not being filled. There are a number of ways this can be done. In this case, an automatic butterfly valve with a physical spool to disconnect the tank from the duct will be utilized.
- The ducting/piping costs quoted in the Eichleay study are from 2005 and must be adjusted to reflect 2017 prices. An overall inflation amount of 22.89% which was taken from the United States Department of Labor, Bureau of Labor Statistics, Consumer Price Index (CPI) Inflation Calculator and applied to the ducting/piping costs to determine the current 2016 prices: http://www.bls.gov/data/inflation_calculator.htm.
- Main duct is presumed to run 10 feet above the ground floor.
- Emission control equipment is presumed to be located 10 feet away from the tank group 1.
- See ducting layout diagrams in Appendix D1.

Capital Cost of Ductwork

Based on the tank layout sketches in Appendix D1, the cost for the tank group(s) proposed in this project is summarized below:

Tank group 1 (N-1665-497 through '-506):

Connection length from 10 tanks to main duct = 10 tanks x [(19.5-10) feet + (11/2 + 5/2) feet] x $31.09/foot = $5,441
Piping length from node 1 to 2 = 64 feet x $31.09/foot = $1,990
Piping length from node 2 to emissions control = 10 feet x $31.09/foot = $311
6 inch butterfly valves = $2,125/tank x 10 tanks = $21,250
Removable spool = $500/tank x 10 tanks = $5,000
1 Knockout drum = $23,000 (info from project N-1162270)
Structural support allowance = $23,000 (info from project N-1162270)

Total cost for group 1 of 10 tanks = $79,992

Tank group 2 (N-1665-508 through '-513):

Connection length from 6 tanks to main duct = (2 tanks x ((20 -10) feet + (14/2)) feet + 2 tanks x ((18 -10) feet + (11.5/2)) feet + 2 tanks x ((14 -10) feet + (9.25/2)) feet) x $31.09/foot = $2,448
Piping length from node 1 to 2 = 59 feet x $31.09/foot = $1,834
Piping length from node 2 to emissions control = 108 feet x $31.09 = $3,358
6 inch butterfly valves = $2,125/tank x 6 tanks = $12,750
Removable spool = $500/tank x 6 tanks = $3,000

1 Knockout drum = $14,648[1]
Structural support allowance = $14,648

Total cost for group 2 of 6 tanks = $52,686

Total Capital Cost for the Tank Group(s):
The total capital cost of the ductwork is summarized in the table below:

Tank Group9s)	Total Ducting Cost Including Support Allowance
Group 1 and 2	$132,678 ($52,686+$79,992)

Capital Cost of Ductwork for Wine Storage Tanks	
Cost Description	Cost ($)
Combined Duct Estimate for all Tank Groups	$132,678
Adjusting factor for inflation from 2005 dollars to 2017 dollars (22.89% total increase)	1.2289
Inflation adjusted duct cost	$163,048
The following cost data is taken from EPA Control Cost Manual, Sixth Edition (EPA/452/B-02-001).	
Direct Costs	
Base Equipment Costs (Ductwork) See Above	$163,048
Instrumentation (not required)	-
Sales Tax - 3.31% of base equipment	$5,397
Freight - 5% of base equipment	$8,152
Purchased equipment cost (PEC)	**$176,597**
Foundations & supports 8% (allowance already included in cost estimate)	-
Handling & erection 14% (already included in Eichleay cost estimate)	-
Electrical 4% (not required)	-
Piping 2% (not required)	-
Painting 1% (not required)	-
Insulation 1% of PEC	$1,766
Direct Installation Costs (DIC)	**$1,766**
Total Direct Costs (DC) (PEC + DIC)	**$178,363**
Indirect Costs	
Engineering - 10% of PEC	$17,660
Construction and field expenses - 5% of PEC	$8,830
Contractor Fees - 10% of PEC	$17,660
Start-up - 2% of PEC	$3,532
Performance Test - 1% of PEC	$1,766
Total Indirect Costs (IC)	**$49,448**
Subtotal Capital Investment (SCI) (DC + IC)	**$227,811**
Contingencies – 15% of SCI	$34,172
Total Capital Investment (TCI) (SCI + Contingency)	**$261,983**

[1]Cost is presumed to be directly proportional the tank capacity; $23,000 x (90,550 gal total capacity/142,180 gal total capacity)

Capital Cost Clean-In-Place (CIP) System

A ducting system on a tank farm must have this system to maintain sanitation and quality of the product. The cost of CIP system and its operation has not been estimated for this project.

Annualized Capital Cost

Total capital costs = Ductwork only
= $261,983

Annualized Capital Investment = Initial Capital Investment x Amortization Factor

Amortization Factor = $\left[\frac{0.1(1.1)^{10}}{(1.1)^{10}-1}\right]$ = 0.163 per District policy, amortizing over 10 years at 10%

Therefore,

Total Collection System Annualized Capital Investment = $261,983 x 0.163 = $42,703

Option 1 - Collection of VOCs and Control by Thermal or Catalytic Oxidation (88% collection & control):

Total Annual Cost

Total Annual Cost = $42,703 (duct work only)

Emission Reductions

Annual Emission Reduction = Uncontrolled Emissions x 0.88
= 720 lb-VOC/year x 0.88
= 634 lb-VOC/year
= 0.32 tons-VOC/year

Cost Effectiveness

Cost Effectiveness = Total Annual Cost ÷ Annual Emission Reductions

Cost Effectiveness = $42,703/year ÷ 1.38 tons-VOC/year
= $133,447/ton-VOC

The analysis demonstrates that the annualized purchase cost of the required collection system ductwork equipment alone results in a cost effectiveness which exceeds the District's BACT cost effectiveness threshold of $17,500/ton for VOC. Therefore, this option is not cost-effective and will not be considered for this project.

Option 2 - Collection of VOCs and control by carbon adsorption (86% collection and control):

Total Annual Cost

Total Annual Cost = $42,703 (duct work only)

Emission Reductions

Annual Emission Reduction = Uncontrolled Emissions x 0.86
= 720 lb-VOC/year x 0.86
= 619 lb-VOC/year
= 0.31 tons-VOC/year

Cost Effectiveness

Cost Effectiveness = Total Annual Cost ÷ Annual Emission Reductions

Cost Effectiveness = $42,703/year ÷ 0.31 tons-VOC/year
= $137,752/ton-VOC

The analysis demonstrates that the annualized purchase cost of the required collection system ductwork equipment alone results in a cost effectiveness which exceeds the District's BACT cost effectiveness threshold of $17,500/ton for VOC. Therefore, this option is not cost-effective and will not be considered for this project.

Option 3 & 4 - Collection of VOCs and Control by Absorption Scrubber/condensation (81% collection & control):

Total Annual Cost

Total Annual Cost = $42,703 (duct work only)

Emission Reductions

Annual Emission Reduction = Uncontrolled Emissions x 0.81
= 720 lb-VOC/year x 0.90
= 583 lb-VOC/year
= 0.29 tons-VOC/year

Cost Effectiveness

Cost Effectiveness = Total Annual Cost ÷ Annual Emission Reductions

Cost Effectiveness = $42,703/year ÷ 0.29 tons-VOC/year
= $147,252/ton-VOC

The analysis demonstrates that the annualized purchase cost of the required collection system ductwork equipment alone results in a cost effectiveness which exceeds the District's BACT cost effectiveness threshold of $17,500/ton for VOC. Therefore, this option is not cost-effective and will not be considered for this project.

Option 5 - Insulation, PVRV, "Gas-Tight" Tank Operation, and Storage Temperature not Exceeding 75 deg F, Achieved within 60 days of Completion of Fermentation):

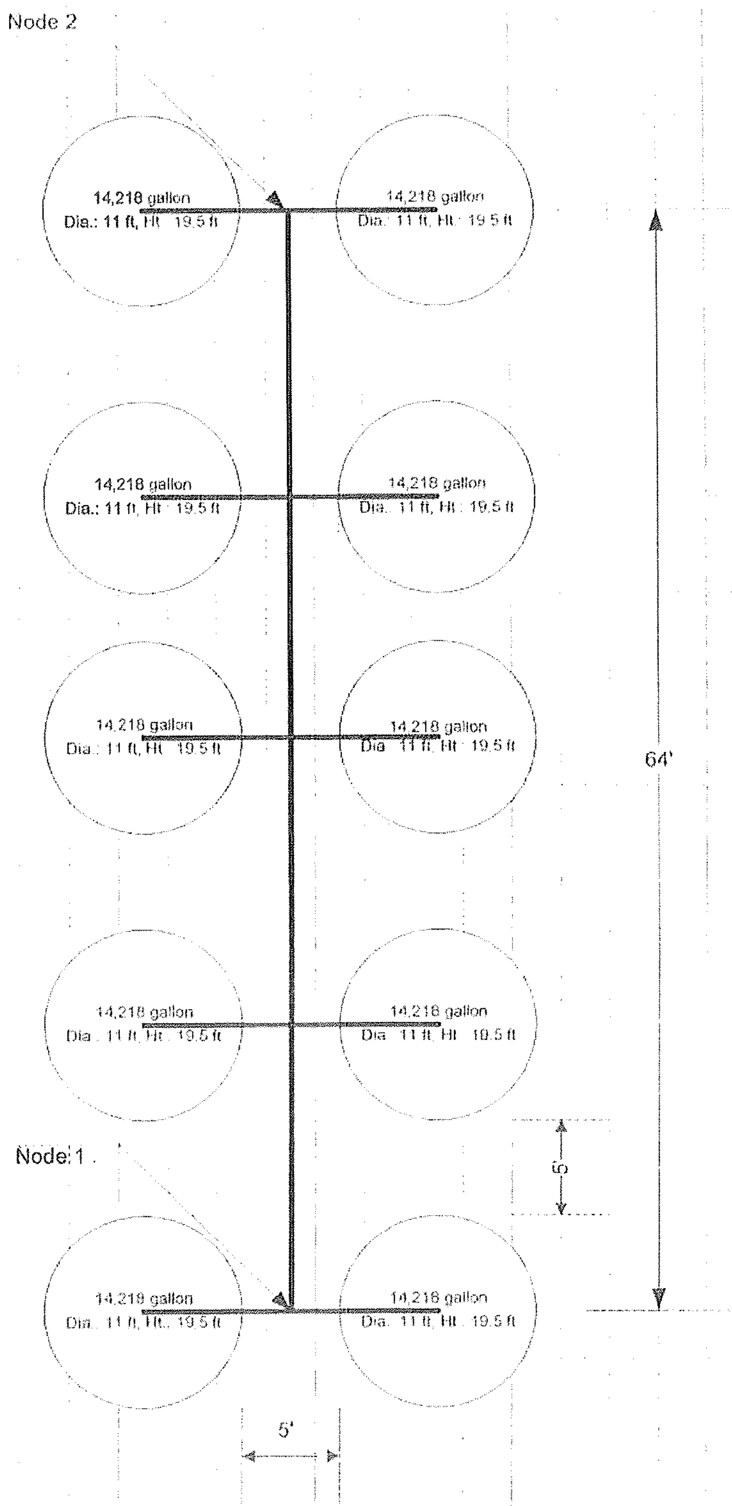
The only remaining control option in step 3 above has been deemed AIP for this class and category of source and per the District BACT policy is required regardless of the cost. Therefore, a cost effectiveness analysis is not required.

Step 5 – Select BACT

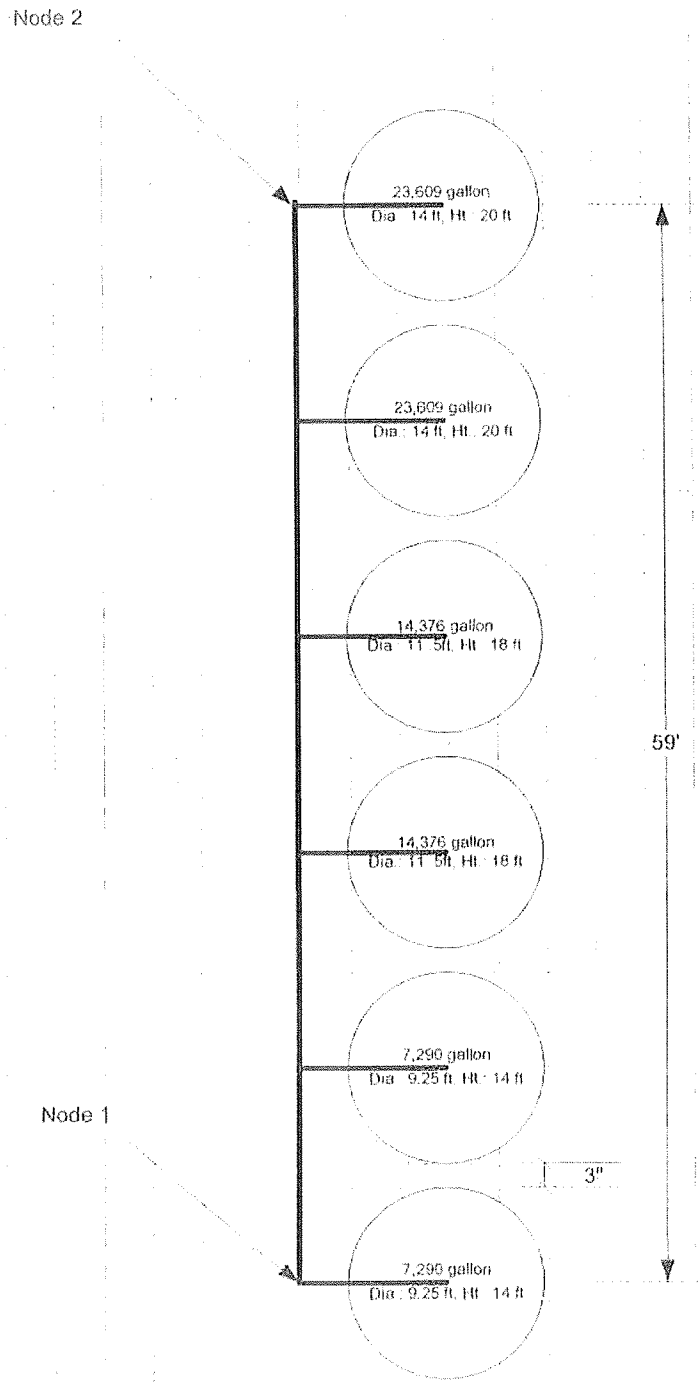
All identified feasible options with control efficiencies higher than the option proposed by the facility are not cost effective. Each of these wine storage tanks is insulated and is equipped with pressure/vacuum valve set within 10% of the maximum allowable working pressure of the tank and is being operated "gas tight" tank operation. The applicant has proposed to maintain a continuous storage temperature at or below 75°F within 60 days of completion of fermentation. Therefore, this proposal complies with the BACT requirements.

Appendix D1
Tank Configuration

Group 1 (N-1665-497 through '-506)



Group 2 (N-1665-508 through '-513)



Appendix D2
Ducting/Piping Cost Survey

Ducting/Piping Cost Comparison

Duct Size Diameter (in.)	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"	28"
Eichleay - Ducting/Piping Only $/Foot	-	-	-	$23.17	$38.59	$54.00	$62.00	$65.50	$69.00	$86.00	$92.00	$99.00	$106.00	$119.00
Eichleay - Ducting/Piping Only $/Foot Including 21.93% for Inflation	-	-	-	$28.25	$47.05	$65.84	$75.60	$79.86	$84.13	$104.86	$112.18	$120.71	$129.25	$145.10
Average of District Cost Survey in $/Foot	$15.49	$30.85	$27.67	$44.13	$37.50	$33.13	$93.75	$181.70	$216.50	$169.02	$308.40	-	$193.99	-

Ducting/Piping Costs based on Eichleay Report

Note: Minimum of 6" Diameter for Structural Support

Duct Size Diameter (in.)	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"	28"
Ducting/Piping Only $/Foot	-	-	-	$23.17	$38.59	$54.00	$62.00	$65.50	$69.00	$86.00	$92.00	$99.00	$106.00	$119.00
Ducting + Fittings, Bolt Up, Handling, & Install $/Foot	-	-	-	$62.17	$103.25	$144.33	$143.83	$174.17	$204.52	$251.38	$309.38	$306.44	$337.67	$476.73
Ducting + Fittings, Bolt Up, Handling, & Install $/Foot	-	-	-	$62.17	$103.25	$144.33	$143.83	$174.17	$204.52	$251.38	$309.38	$306.44	$397.67	$476.73

Supplier: Grainger (http://www.grainger.com) Location: Fresno, CA and Ceres, CA

Schedule 10													
Duct Size Diameter (in.)	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"
Price ($)	$229.50	$387.75	$587.50	-	-	-	-		-	-	-	-	-
Length (feet)	10	10	10	-	-	-	-		-	-	-	-	-
Price/Foot ($)	$22.95	$38.78	$58.75	-	-	-	-		-	-	-	-	-

Supplier: Stockton Pipe and & Supply Inc (http://www.stocktonpipe.net) Location: Stockton, CA

Note: Sizes over 12" Diameter need to be ordered from Mill													
0.109" thickness tube or Schedule 10 Pipe													
Duct Size Diameter (in.)	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"
Price ($)	-	-	-	-	-	$700.00	$840.00	-	-	-	-	-	$3,159.60
Length (feet)	-	-	-	-	-	20	20	-	-	-	-	-	20
Price/Foot ($)	-	-	-	-	-	$35.00	$42.00	-	-	-	-	-	$157.98

Supplier: Valley Iron Inc (http://www.stocktonpipe.net) Location: Fresno, CA

Note: Sch 10 T-304 20'													
Schedule 10 Pipe													
Duct Size Diameter (in.)	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"
Length (feet)	-	-	20	20	20	20	-	-	-	-	-	-	-
Price/Foot ($)	-	-	$10.75	$16.90	$26.00	$33.90	-	-	-	-	-	-	-

Supplier: Del Paso Pipe & Steel Inc. (http://www.delpasopipeandsteel.com/) Location: Sacramento, CA

Schedule 5/10 Pipe.													
Duct Size Diameter (in.)	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"
Price Quote $9/lb												–	
Estimated Price/Foot	–	–	–	–	–	–	$217.00	$250.00	$286.00	$322.00	$432.00	–	–
												–	

Supplier: Hayward Pipe & Supply Co. Inc (http://www.haywardpipe.com/) Location: Hayward, CA

Note: large diamter pipe ships from Texas. FREIGHT NOT QUOTED - Additional Shipping Costs apply													
Schedule 10 Pipe													
Duct Size Diameter (in.)	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"
Price ($)	–	–	–	–	–	–	$1,540.00	$2,268.00	$2,940.00	$3,276.00	$3,696.00	–	–
Length (feet)	–	–	–	–	–	–	20	20	20	20	20	–	–
Price/Foot ($)	–	–	–	–	–	–	$77.00	$113.40	$147.00	$163.80	$184.80	–	–

Supplier: OnlineMetals.com (http://www.onlinemetals.com/) Location: Nearest Warehouse - Los Angeles, CA

Schedule 10 Pipe													
Duct Size Diameter (in.)	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"
Price ($)	$75.23	$108.97	$160.34	$288.00	$520.00	–	–	–	–	–	–	–	–
Length (feet)	8	8	8	8	8	–	–	–	–	–	–	–	–
Price/Foot ($)	$9.79	$13.62	$20.04	$36.00	$65.00	–	–	–	–	–	–	–	–
Welded Stainless Tube 304/304L (2" OD, 0.12" Wall; 3" OD, 0.12" Wall; 6", 0.12")													
Duct Size Diameter (in.)	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"
Price ($)	$109.86	$321.34	–	$628.15	–	–	–	–	–	–	–	–	–
Length (feet)	8	8	–	8	–	–	–	–	–	–	–	–	–
Price/Foot ($)	$13.73	$40.17	–	$78.52	–	–	–	–	–	–	–	–	–

Supplier: Lone Star Supply Co Location: Dickinson, TX

Note: Additional shipping costs													
Schedule 10 Welded Pipe													
Duct Size Diameter (in.)	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"
Price/Foot ($)	–	–	$16.45	$19.60	$21.50	$30.50	$39.00	–	–	$81.25	–	–	$230.00
												–	

Supplier: Global Technology and Engineering Location: Excelsior Springs, MO

Note: Additional shipping Costs													
11 Gauge Tubing													
Duct Size Diameter (in.)	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"
Price ($)	–	–	$226.58	$487.40	–	–	–	–	–	–	–	–	–
Length (feet)	–	–	7	7	–	–	–	–	–	–	–	–	–
Price/Foot ($)	–	–	$32.37	$69.63	–	–	–	–	–	–	–	–	–

All suppliers	$30.85	$44.13	70%	
Only suppliers that have both 3" and 6"	$30.85	$57.26	54%	33.50034

Appendix E
Quarterly Net Emissions Change

Quarterly Net Emissions Change (QNEC)

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

QNEC = PE2 - PE1, where:

QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.
PE2 = Post Project Potential to Emit for each emissions unit, lb/qtr.
PE1 = Pre-Project Potential to Emit for each emissions unit, lb/qtr.

N-1665-497-3 through '-506-3, '-508-2 through '-513-2:
The applicant has proposed to establish a combined annual emission limit for these permit. Therefore,

$PE2_{quarterly,\ SLC} = PE2_{annual} \div 4$ quarters/year
= 720 lb/year ÷ 4 qtr/year
= 180 lb-VOC/qtr for all tanks

$PE1_{quarterly} = PE1_{annual} \div 4$ quarters/year
= 720 lb-VOC/year ÷ 4 qtr/year
= 180 lb-VOC/qtr for all tanks

Quarterly NEC [QNEC]			
Pollutant	**PE2 (lb/qtr)**	**PE1 (lb/qtr)**	**QNEC (lb/qtr)**
NO_X	0	0	0
SO_X	0	0	0
PM_{10}	0	0	0
CO	0	0	0
VOC	180	180	0

Appendix F
Compliance Certification

BRONCO WINE COMPANY

P.O. BOX 789
CERES, CALIFORNIA 95307

OFFICE:
6342 BYSTRUM ROAD
CERES, CALIFORNIA 95307
(209) 538-3131
ADMINISTRATION FAX: (209) 538-4634
WINERY FAX: (209) 537-9321

11/7/2017

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

Subject: Compliance Statement for Bronco Wine Company Facility Number: N-1665

Dear Mr. Kahlon:

In accordance with Rule 2201, Section 4.15, "Additional Requirements for New Major Sources and Federal Major Modifications," Bronco Wine Company is pleased to provide this compliance statement regarding its proposed wine storage tank project N-1172886.

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

Facility #1: Bronco Wine Company- 6342 Bystrum Rd, Ceres CA 95307

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

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

Sincerely,

René Soto

Rene Soto, Maintenance Manager
Bronco Wine Company

Appendix G
Potential to Emit – TANKS 4.0 Reports

Appendix G
Baseline Actual Emissions Calculations – TANKS 4.0 Reports

Permit	Throughput (gal)		Avg. Throughput	Throughput limit	Avg Temp.		Avg. Wine Storage Temp.	Temp limit	Avg alcohol %		Average. Wine Alcohol	Alcohol limit	BAE (Ethanol + Water)	Average vapr molecular weight at average % content	BAE (Ethanol)	PE2
	08/01/15 - 7/31/16	8/1/16- 7/31/17	gal/yr	gal/yr	08/01/15 - 7/31/16	8/1/16- 7/31/17	F	F	08/01/15 - 7/31/16	8/1/16- 7/31/17	% by. Vol.	% by vol.	lb-VOC/yr		lb-VOC/yr	lb-VOC/yr
N-1665-497-3	266,555	286,878	276,717	425,000	52.1	51.6	52	75	12.7	13.0	12.9	14	45	26.4205	23	
N-1665-498-3	184,979	262,408	223,694	425,000	52.8	51.0	52	75	12.6	12.9	12.7	14	36	26.3543	19	
N-1665-499-3	236,447	255,179	245,813	425,000	52.9	51.9	52	75	12.6	12.8	12.7	14	39	26.3543	21	
N-1665-500-3	229,088	221,119	225,104	425,000	51.1	51.7	51	75	12.5	12.6	12.5	14	34	26.2883	18	
N-1665-501-3	195,605	210,371	202,988	425,000	52.8	52.8	53	75	13.1	12.9	13.0	14	34	26.4536	18	
N-1665-502-3	207,760	227,007	217,384	425,000	53.4	52.8	53	75	12.8	13.0	12.9	14	37	26.4205	19	
N-1665-503-3	150,950	194,793	172,872	425,000	52.0	52.2	52	75	12.7	12.6	12.6	14	28	26.3213	14	
N-1665-504-3	146,686	166,264	156,475	425,000	51.7	51.6	52	75	12.8	12.7	12.7	14	25	26.3543	13	720
N-1665-505-3	173,955	234,645	204,300	425,000	51.2	51.5	51	75	12.8	12.7	12.8	14	32	26.3873	16	
N-1665-506-3	146,976	216,488	181,732	425,000	51.4	50.2	51	75	12.8	12.6	12.7	14	28	26.3543	15	
N-1665-508-2	98,040	451,722	274,881	232,000	47.6	55.9	52	75	12.1	12.4	12.2	14	37	26.1135	19	
N-1665-509-2	84,829	348,784	216,807	232,000	48.8	55.4	52	75	12.6	12.1	12.4	14	34	26.2553	18	
N-1665-510-2	106,563	221,672	164,118	232,000	45.2	54.2	50	75	11.8	12.0	11.9	14	23.37	25.8992	12	
N-1665-511-2	111,005	221,099	166,052	232,000	45.4	52.3	49	75	12.0	12.3	12.1	14	23	26.0420	12	
N-1665-512-2	57,695	72,204	64,950	232,000	48.1	53.9	51	75	12.5	11.7	12.1	14	10	26.0420	5	
N-1665-513-2	75,517	73,193	74,355	232,000	46.4	50.6	48	75	12.3	12.6	12.4	14	10	26.2553	5	
														Total	246	720
														NEI:	474	lb-VOC/yr
														Federal offset quantity:	711	lb-VOC/yr

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification		
User Identification:	N-1665-497-3	
City:	Ceres	
State:	California	
Company:	Bronco Wine Company	
Type of Tank:	Vertical Fixed Roof Tank	
Description:	Wine Storage Tank	
Tank Dimensions		
Shell Height (ft):		20.00
Diameter (ft):		11.00
Liquid Height (ft) :		19.50
Avg. Liquid Height (ft):		19.00
Volume (gallons):		14,218.00
Turnovers:		19.46
Net Throughput(gal/yr):		276,717.00
Is Tank Heated (y/n):	Y	
Paint Characteristics		
Shell Color/Shade:	White/White	
Shell Condition	Good	
Roof Color/Shade:	White/White	
Roof Condition:	Good	
Roof Characteristics		
Type:	Cone	
Height (ft)		1.00
Slope (ft/ft) (Cone Roof)		0.18
Breather Vent Settings		
Vacuum Settings (psig):		0.00
Pressure Settings (psig)		0.00

Meterological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

N-1665-497-3 - Vertical Fixed Roof Tank
Ceres, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Wine 12 9 % Vol Alcohol	All	52 00	52.00	52.00	52 00	0.2568	0.2568	0 2568	26 4205			19.24	Option 1: VP50 = .23531 VP60 = .34253

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

N-1665-497-3 - Vertical Fixed Roof Tank
Ceres, California

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Wine 12.9 % Vol Alcohol	44.69	0.00	44.69

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	N-1665-498-3
City:	Ceres
State:	California
Company:	Bronco Wine Company
Type of Tank:	Vertical Fixed Roof Tank
Description:	Wine Storage Tank

Tank Dimensions

Shell Height (ft):		20.00
Diameter (ft):		11.00
Liquid Height (ft) :		19.50
Avg. Liquid Height (ft):		19.00
Volume (gallons):		14,218.00
Turnovers:		15.73
Net Throughput(gal/yr):		223,694.00
Is Tank Heated (y/n):	Y	

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone	
Height (ft)		1.00
Slope (ft/ft) (Cone Roof)		0.18

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meterological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

N-1665-498-3 - Vertical Fixed Roof Tank
Ceres, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg	Min	Max	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max	Vapor Mol Weight	Liquid Mass Fract	Vapor Mass Fract	Mol. Weight	Basis for Vapor Pressure Calculations
Wine 12 7 % Vol Alcohol	All	52 00	52 00	52 00	52 00	0 2558	0 2558	0 2558	26 3543			19 22	Option 1: VP50 = .23444 VP60 = .34134

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

N-1665-498-3 - Vertical Fixed Roof Tank
Ceres, California

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Wine 12.7 % Vol Alcohol	35.91	0.00	35.91

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	N-1665-499-3
City:	Ceres
State:	California
Company:	Bronco Wine Company
Type of Tank:	Vertical Fixed Roof Tank
Description:	Wine storage tank

Tank Dimensions

Shell Height (ft):	20.00
Diameter (ft):	11.00
Liquid Height (ft) :	19.50
Avg. Liquid Height (ft):	19.00
Volume (gallons):	14,218.00
Turnovers:	18.46
Net Throughput(gal/yr):	245,813.00
Is Tank Heated (y/n):	Y

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	1.00
Slope (ft/ft) (Cone Roof)	0.18

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meterological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

N-1665-499-3 - Vertical Fixed Roof Tank
Ceres, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract	Vapor Mass Fract	Mol. Weight	Basis for Vapor Pressure Calculations
Wine 12.7 % Vol Alcohol	All	52.00	52.00	52.00	52.00	0.2558	0.2558	0.2558	26.3543			19.22	Option 1: VP50 = .23444 VP60 = .34134

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

N-1665-499-3 - Vertical Fixed Roof Tank
Ceres, California

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Wine 12.7 % Vol Alcohol	39.46	0.00	39.46

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	N-1665-500-3
City:	Ceres
State:	California
Company:	Bronco Wine Company
Type of Tank:	Vertical Fixed Roof Tank
Description:	Wine storage tank

Tank Dimensions

Shell Height (ft):		20.00
Diameter (ft):		11.00
Liquid Height (ft) :		19.50
Avg. Liquid Height (ft):		19.00
Volume (gallons):		14,218.00
Turnovers:		15.83
Net Throughput(gal/yr):		225,104.00
Is Tank Heated (y/n):	Y	

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone	
Height (ft)		1.00
Slope (ft/ft) (Cone Roof)		0.18

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meterological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

N-1665-500-3 - Vertical Fixed Roof Tank
Ceres, California

Mixture/Component	Month	Daily Liquid Surf Temperature (deg F) Avg	Min	Max	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract	Mol. Weight	Basis for Vapor Pressure Calculations
Wine 12.5 % Vol Alcohol	All	51.00	51.00	51.00	51.00	0.2442	0.2442	0.2442	26.2883			19.20	Option 1: VP50 = .23357 VP60 = .34016

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

N-1665-500-3 - Vertical Fixed Roof Tank
Ceres, California

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Wine 12.5 % Vol Alcohol	34.41	0.00	34.41

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	N-1665-501-3*
City:	Ceres
State:	California
Company:	Bronco Wine Company
Type of Tank:	Vertical Fixed Roof Tank
Description:	Wine Storage Tank

Tank Dimensions

Shell Height (ft):	20.00
Diameter (ft):	11.00
Liquid Height (ft) :	19.50
Avg. Liquid Height (ft):	19.00
Volume (gallons):	14,218.00
Turnovers:	14.28
Net Throughput(gal/yr):	202,988.00
Is Tank Heated (y/n):	Y

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	1.00
Slope (ft/ft) (Cone Roof)	0.18

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meterological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

N-1665-501-3* - Vertical Fixed Roof Tank
Ceres, California

Mixture/Component	Month	Daily Liquid Surf Temperature (deg F) Avg	Min	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol Weight	Basis for Vapor Pressure Calculations
Wine 13.0 % Vol Alcohol	All	53.00	53.00	53.00	53.00	0.2680	0.2680	0.2680	26.4536			19.25	Option 1: VP50 = .23575 VP60 = .34312

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

N-1665-501-3* - Vertical Fixed Roof Tank
Ceres, California

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Wine 13.0 % Vol Alcohol	34.26	0.00	34.26

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	N-1665-502-3
City:	Ceres
State:	California
Company:	Bronco Wine Company
Type of Tank:	Vertical Fixed Roof Tank
Description:	Wine Storage Tank

Tank Dimensions

Shell Height (ft):	20.00
Diameter (ft):	11.00
Liquid Height (ft) :	19.50
Avg. Liquid Height (ft):	19.00
Volume (gallons):	14,218.00
Turnovers:	14.28
Net Throughput(gal/yr)	217,384.00
Is Tank Heated (y/n):	Y

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	1.00
Slope (ft/ft) (Cone Roof)	0.18

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meterological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

N-1665-502-3 - Vertical Fixed Roof Tank
Ceres, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg	Min	Max	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg	Min	Max.	Vapor Mol. Weight	Liquid Mass Fract	Vapor Mass Fract	Mol. Weight	Basis for Vapor Pressure Calculations
Wine 12.9 % Vol Alcohol	All	53.00	53.00	53.00	53.00	0.2675	0.2675	0.2675	26.4205			19.24	Option 1: VP50 = .23531 VP60 = .34253

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

N-1665-502-3 - Vertical Fixed Roof Tank
Ceres, California

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Wine 12.9 % Vol Alcohol	36.58	0.00	36.58

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	N-1665-503-3
City:	Ceres
State:	California
Company:	Bronco Wine Company
Type of Tank:	Vertical Fixed Roof Tank
Description:	Wine Storage Tank

Tank Dimensions

Shell Height (ft):	20.00
Diameter (ft):	11.00
Liquid Height (ft) :	19.50
Avg. Liquid Height (ft):	19.00
Volume (gallons):	14,218.00
Turnovers:	12.16
Net Throughput(gal/yr):	172,872.00
Is Tank Heated (y/n):	Y

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	1.00
Slope (ft/ft) (Cone Roof)	0.18

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meterological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

N-1665-503-3 - Vertical Fixed Roof Tank
Ceres, California

Mixture/Component	Month	Daily Liquid Surf Temperature (deg F) Avg	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract	Mol. Weight	Basis for Vapor Pressure Calculations
Wine 12.6 % Vol Alcohol	All	52.00	52.00	52.00	52.00	0.2554	0.2554	0.2554	26.3213			19.21	Option 1: VP50 = .234 VP60 = .34075

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

N-1665-503-3 - Vertical Fixed Roof Tank
Ceres, California

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Wine 12.6 % Vol Alcohol	27.66	0.00	27.66

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	N-1665-504-3
City:	Ceres
State:	California
Company:	Bronco Wine Company
Type of Tank:	Vertical Fixed Roof Tank
Description:	Wine Storage Tank

Tank Dimensions

Shell Height (ft):		20.00
Diameter (ft):		11.00
Liquid Height (ft) :		19.50
Avg. Liquid Height (ft):		19.00
Volume (gallons):		14,218.00
Turnovers:		11.00
Net Throughput(gal/yr):		156,475.00
Is Tank Heated (y/n):	Y	

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone	
Height (ft)		1.00
Slope (ft/ft) (Cone Roof)		0.18

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meterological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

N-1665-504-3 - Vertical Fixed Roof Tank
Ceres, California

Mixture/Component	Month	Daily Liquid Surf Temperature (deg F) Avg	Min	Max	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg	Min.	Max	Vapor Mol. Weight.	Liquid Mass Fract	Vapor Mass Fract.	Mol Weight	Basis for Vapor Pressure Calculations
Wine 12.7 % Vol Alcohol	All	52.00	52.00	52.00	52.00	0.2558	0.2558	0.2558	26.3543			19.22	Option 1: VP50 = .23444 VP60 = .34134

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

N-1665-504-3 - Vertical Fixed Roof Tank
Ceres, California

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Wine 12.7 % Vol Alcohol	25.12	0.00	25.12

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	N-1665-505-3
City:	Ceres
State:	California
Company:	Bronco Wine Company
Type of Tank:	Vertical Fixed Roof Tank
Description:	Wine Storage Tank

Tank Dimensions

Shell Height (ft):		20.00
Diameter (ft):		11.00
Liquid Height (ft) :		19.50
Avg. Liquid Height (ft):		19.00
Volume (gallons):		14,218.00
Turnovers:		14.37
Net Throughput(gal/yr):		204,300.00
Is Tank Heated (y/n):	Y	

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone	
Height (ft)		1.00
Slope (ft/ft) (Cone Roof)		0.18

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meterological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

N-1665-505-3 - Vertical Fixed Roof Tank
Ceres, California

Mixture/Component	Month	Daily Liquid Surf Temperature (deg F) Avg.	Min	Max	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg	Min.	Max	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol Weight	Basis for Vapor Pressure Calculations
Wine 12.8 % Vol Alcohol	All	51.00	51.00	51.00	51.00	0.2456	0.2456	0.2456	26 3873			19 23	Option 1: VP50 = .23488 VP60 = .34194

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

N-1665-505-3 - Vertical Fixed Roof Tank
Ceres, California

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Wine 12.8 % Vol Alcohol	31.52	0.00	31.52

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification		
User Identification:	N-1665-506-3	
City:	Ceres	
State:	California	
Company:	Bronco Wine Company	
Type of Tank:	Vertical Fixed Roof Tank	
Description:	Wine Storage Tank	
Tank Dimensions		
Shell Height (ft):		20.00
Diameter (ft):		11.00
Liquid Height (ft) :		19.50
Avg. Liquid Height (ft):		19.00
Volume (gallons):		14,218.00
Turnovers:		12.78
Net Throughput(gal/yr):		181,732.00
Is Tank Heated (y/n):	Y	
Paint Characteristics		
Shell Color/Shade:	White/White	
Shell Condition	Good	
Roof Color/Shade:	White/White	
Roof Condition:	Good	
Roof Characteristics		
Type:	Cone	
Height (ft)		1.00
Slope (ft/ft) (Cone Roof)		0.18
Breather Vent Settings		
Vacuum Settings (psig):		0.00
Pressure Settings (psig)		0.00

Meterological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

N-1665-506-3 - Vertical Fixed Roof Tank
Ceres, California

Mixture/Component	Month	Daily Liquid Surf Temperature (deg F) Avg.	Min.	Max	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg	Min	Max.	Vapor Mol Weight	Liquid Mass Fract	Vapor Mass Fract	Mol. Weight	Basis for Vapor Pressure Calculations
Wine 12 7 % Vol Alcohol	All	51 00	51.00	51.00	51.00	0 2451	0.2451	0 2451	26 3543			19.22	Option 1: VP50 = .23444 VP60 = .34134

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

N-1665-506-3 - Vertical Fixed Roof Tank
Ceres, California

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Wine 12.7 % Vol Alcohol	27.95	0.00	27.95

TANKS 4.0.9d

Emissions Report - Summary Format

Tank Indentification and Physical Characteristics

Identification

User Identification:	N-1665-508-2
City:	Ceres
State:	California
Company:	Bronco Wine Company
Type of Tank:	Vertical Fixed Roof Tank
Description:	Wine Storage Tank

Tank Dimensions

Shell Height (ft):	20.00
Diameter (ft):	14.00
Liquid Height (ft) :	20.00
Avg. Liquid Height (ft):	19.00
Volume (gallons):	23,609.00
Turnovers:	10.00
Net Throughput(gal/yr):	232,000.00
Is Tank Heated (y/n):	Y

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	1.00
Slope (ft/ft) (Cone Roof)	0.14

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meterological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

N-1665-508-2 - Vertical Fixed Roof Tank
Ceres, California

Mixture/Component	Month	Daily Liquid Surf Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Wine 12.2 % Vol Alcohol	All	52.00	52.00	52.00	52.00	0.2534	0.2534	0.2534	26.1135			19.17	Option 1: VP50 = .23224 VP60 = .33816

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

N-1665-508-2 - Vertical Fixed Roof Tank
Ceres, California

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Wine 12.2 % Vol Alcohol	36.56	0.00	36.56

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	N-1665-509-2
City:	Ceres
State:	California
Company:	Bronco Wine Company
Type of Tank:	Vertical Fixed Roof Tank
Description:	Wine Storage Tank

Tank Dimensions

Shell Height (ft):		20.00
Diameter (ft):		14.00
Liquid Height (ft) :		20.00
Avg. Liquid Height (ft):		19.00
Volume (gallons):		23,609.00
Turnovers:		10.00
Net Throughput(gal/yr):		216,807.00
Is Tank Heated (y/n):	Y	

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone	
Height (ft)		1.00
Slope (ft/ft) (Cone Roof)		0.14

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meterological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

N-1665-509-2 - Vertical Fixed Roof Tank
Ceres, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Wine 12 4 % Vol Alcohol	All	52.00	52.00	52.00	52 00	0.2544	0 2544	0.2544	26.2553			19.19	Option 1: VP50 = .23313 VP60 = .33958

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

N-1665-509-2 - Vertical Fixed Roof Tank
Ceres, California

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Wine 12.4 % Vol Alcohol	34.48	0.00	34.48

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	N-1665-510-2	
City:	Ceres	
State:	California	
Company:	Bronco Wine Company	
Type of Tank:	Vertical Fixed Roof Tank	
Description:	Wine Storage Tank	

Tank Dimensions

Shell Height (ft):		18.00
Diameter (ft):		11.50
Liquid Height (ft) :		18.00
Avg. Liquid Height (ft):		17.50
Volume (gallons):		14,376.00
Turnovers:		11.42
Net Throughput(gal/yr):		164,118.00
Is Tank Heated (y/n):	Y	

Paint Characteristics

Shell Color/Shade:	White/White	
Shell Condition	Good	
Roof Color/Shade:	White/White	
Roof Condition:	Good	

Roof Characteristics

Type:	Cone	
Height (ft)		1.00
Slope (ft/ft) (Cone Roof)		0.17

Breather Vent Settings

Vacuum Settings (psig):		0.00
Pressure Settings (psig)		0.00

Meterological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

N-1665-510-2 - Vertical Fixed Roof Tank
Ceres, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg	Min	Max	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min	Max.	Vapor Mol Weight	Liquid Mass Fract.	Vapor Mass Fract	Mol Weight	Basis for Vapor Pressure Calculations
Wine 11 9 % Vol Alcohol	All	50 00	50 00	50.00	50 00	0 2309	0 2309	0.2309	25.8992			19 14	Option 1: VP40 = 15627 VP50 = 23088

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

N-1665-510-2 - Vertical Fixed Roof Tank
Ceres, California

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Wine 11.9 % Vol Alcohol	23.37	0.00	23.37

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification		
User Identification:	N-1665-511-2	
City:	Ceres	
State:	California	
Company:	Bronco Wine Company	
Type of Tank:	Vertical Fixed Roof Tank	
Description:	Wine Storage Tank	
Tank Dimensions		
Shell Height (ft):		18.00
Diameter (ft):		11.50
Liquid Height (ft) :		18.00
Avg. Liquid Height (ft):		17.50
Volume (gallons):		14,376.00
Turnovers:		11.42
Net Throughput(gal/yr):		166,052.00
Is Tank Heated (y/n):	Y	
Paint Characteristics		
Shell Color/Shade:	White/White	
Shell Condition	Good	
Roof Color/Shade:	White/White	
Roof Condition:	Good	
Roof Characteristics		
Type:	Cone	
Height (ft)		1.00
Slope (ft/ft) (Cone Roof)		0.17
Breather Vent Settings		
Vacuum Settings (psig):		0.00
Pressure Settings (psig)		0.00

Meterological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

N-1665-511-2 - Vertical Fixed Roof Tank
Ceres, California

Mixture/Component	Month	Daily Liquid Surf Temperature (deg F) Avg	Min	Max	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg	Min	Max	Vapor Mol Weight.	Liquid Mass Fract	Vapor Mass Fract	Mol Weight	Basis for Vapor Pressure Calculations
Wine 12.1 % Vol Alcohol	All	49.00	49.00	49.00	49.00	0.2243	0.2243	0.2243	26.0420			19.16	Option 1: VP40 = .15683 VP50 = .23178

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

N-1665-511-2 - Vertical Fixed Roof Tank
Ceres, California

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Wine 12.1 % Vol Alcohol	23.09	0.00	23.09

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	N-1665-512-2
City:	Ceres
State:	California
Company:	Bronco Wine Company
Type of Tank:	Vertical Fixed Roof Tank
Description:	Wine Storage Tank

Tank Dimensions

Shell Height (ft):	14.00
Diameter (ft):	9.25
Liquid Height (ft) :	14.00
Avg. Liquid Height (ft):	13.00
Volume (gallons):	7,290.00
Turnovers:	8.91
Net Throughput(gal/yr):	64,950.00
Is Tank Heated (y/n):	Y

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	1.00
Slope (ft/ft) (Cone Roof)	0.22

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meterological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

N-1665-512-2 - Vertical Fixed Roof Tank
Ceres, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol Weight	Basis for Vapor Pressure Calculations
Wine 12 1 % Vol Alcohol	All	51.00	51.00	51.00	51.00	0.2423	0.2423	0.2423	26.0420			19.16	Option 1: VP50 = .23178 VP60 = .33745

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

N-1665-512-2 - Vertical Fixed Roof Tank
Ceres, California

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Wine 12.1 % Vol Alcohol	9.76	0.00	9.76

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	N-1665-513-2
City:	Ceres
State:	California
Company:	Bronco Wine Company
Type of Tank:	Vertical Fixed Roof Tank
Description:	Wine Storage Tank

Tank Dimensions

Shell Height (ft):		14.00
Diameter (ft):		9.25
Liquid Height (ft) :		14.00
Avg. Liquid Height (ft):		13.00
Volume (gallons):		7,290.00
Turnovers:		10.20
Net Throughput(gal/yr):		74,355.00
Is Tank Heated (y/n):	Y	

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone	
Height (ft)		1.00
Slope (ft/ft) (Cone Roof)		0.22

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meterological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

N-1665-513-2 - Vertical Fixed Roof Tank
Ceres, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max	Vapor Mol Weight	Liquid Mass Fract	Vapor Mass Fract.	Mol Weight	Basis for Vapor Pressure Calculations
Wine 12.4 % Vol Alcohol	All	48.00	48.00	48.00	48.00	0.2180	0.2180	0.2180	26.2553			19.19	Option 1: VP40 = .15767 VP50 = .23313

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

N-1665-513-2 - Vertical Fixed Roof Tank
Ceres, California

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Wine 12.4 % Vol Alcohol	10.13	0.00	10.13

Appendix H
FYI - 114

FYI-114

SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT

DATE: March 8, 2007 (Revised 09/14/09) (Revised 8/10/11) (Revised 6/13/12)

TO: Permit Services Staff

FROM: Dennis Roberts

SUBJECT: VOC Emission Factors for Wine Fermentation and Storage Tanks

---

Winery tank operations generally consist of two separate emissions units; 1) fermentation and 2) storage of wine and spirits. Any particular tank may be permitted to perform one or both of these operations. The emissions from each emission unit are appropriately combined to yield the Potential to Emit for the tank (permit unit).

Emissions from fermentation operations are estimated using emission factors which have been developed based on a recognized fermentation model and are presented herein. For wine storage operations, emissions can be determined in general by modeling the storage tank operation using the EPA's Tanks 4.0 software (modeling procedures and an ethanol/water data base have been established as described in FYI-295 (*Modeling Emissions from Wine Storage Tanks)*. However, the majority of wine storage tanks located in the District are insulated storage tanks which do not have a requirement for refrigeration (ambient storage temperature). For this classification of tank the storage emission factor, as calculated by the Tanks 4.0 model, is a function of ethanol content only. For this case the tabular emission factors presented herein are applicable (note that storage tanks which are un-insulated and/or which have NSR limits on the tank operating temperature should be estimated by the emissions modeling per FYI-295).

Wine Storage Tanks

Wine storage tanks perform two functions in the winery:

- Facilitation of post-fermentation processing operations such as racking, filtration, malolactic fermentation and bottling. In this role, the typical storage tank is filled and emptied several times per year with the wine being transferred from tank to tank. Many of these operations occur prior to chilling of the wine. Emissions from such operations are "working losses" which occur as a result of the displacement of the vapor space of the tank into the atmosphere during the filling operations. For insulated tanks (or tanks installed in a climate-controlled building), working losses are a function only of the ethanol content, the ambient temperature and the tank throughput.

- Static storage of wine between processing operations up to the final operation of bottling. In this operation, a common objective is to avoid oxidation of the wine by both minimizing the wine temperature and the exposure of the wine to air. In such cases, the wine may be maintained at a temperature below ambient, often in the range of 35-40 °F, however, since the tank cannot be always maintained at this temperature due to processing considerations, the lower temperatures are not an NSR condition on the permit . Also, the tanks are typically maintained at as high a liquid level as possible to minimize contact with oxygen. Emissions from static storage are

"breathing losses" which are the result of diurnal heating and cooling caused by the effect of daily variations in atmospheric conditions on the contents of the tank. For a well-insulated tank, equipped with a pressure/vacuum relief valve per the requirements of District Rule 4694, breathing losses are considered to be negligible since the insulation serves to maintain a relatively uniform temperature inside the tank while the pressure/vacuum valve serves to contain small internal variations, preventing escape of vapor to the atmosphere.

Table 1 presents emission factors for wine and spirits storage in ambient temperature tanks (non-refrigerated), equipped with insulation and/or located in a climate-controlled building. The tabular values have been developed using the District's emissions modeling procedure for wine and spirits tanks (see FYI-295). As shown, different emission factors are presented for tanks located in the three different regions of the District based upon higher ambient temperatures in the southern part of the Central Valley. All factors represent working losses only since breathing losses are considered negligible as discussed above. Emission factors for concentrations not listed in Table 1 may be interpolated from the table.

Table 1: Emission Factors for Wine and Spirits Storage Tanks by Region in the San Joaquin Valley
lb-VOC per 1,000 gallons of throughput

Applicability:	1. Vertical Fixed-Roof tank, insulated or located in climate-controlled building 2. Ambient temperature storage					
	Southern Region		Central Region		Northern Region	
Vol %	Annual	Daily	Annual	Daily	Annual	Daily
2	0.016	0.029	0.015	0.027	0.014	0.024
4	0.033	0.062	0.032	0.057	0.030	0.051
6	0.052	0.099	0.050	0.092	0.047	0.081
8	0.074	0.141	0.071	0.130	0.067	0.116
10	0.098	0.187	0.094	0.173	0.088	0.154
12	0.125	0.239	0.120	0.221	0.112	0.196
14	0.143	0.273	0.137	0.252	0.128	0.223
16	0.159	0.302	0.153	0.280	0.143	0.248
18	0.176	0.334	0.169	0.310	0.159	0.275
20	0.195	0.368	0.187	0.341	0.175	0.303
22	0.215	0.404	0.207	0.375	0.194	0.333
24	0.237	0.443	0.227	0.412	0.213	0.366
26	0.251	0.470	0.242	0.436	0.227	0.388
28	0.264	0.494	0.254	0.458	0.238	0.408
30	0.278	0.518	0.267	0.481	0.251	0.428
32	0.293	0.544	0.281	0.506	0.264	0.450
34	0.308	0.572	0.296	0.531	0.278	0.473
36	0.324	0.600	0.312	0.559	0.293	0.498
38	0.335	0.620	0.323	0.577	0.303	0.514
40	0.347	0.640	0.334	0.595	0.313	0.530
42	0.358	0.660	0.345	0.614	0.324	0.546
44	0.371	0.681	0.357	0.634	0.335	0.565
46	0.384	0.703	0.370	0.655	0.348	0.584
48	0.396	0.724	0.381	0.674	0.359	0.602
50	0.405	0.738	0.390	0.688	0.367	0.615
52	0.415	0.754	0.400	0.703	0.376	0.628
54	0.425	0.770	0.410	0.718	0.386	0.642
56	0.436	0.788	0.420	0.734	0.396	0.657
58	0.447	0.805	0.431	0.751	0.406	0.673
60	0.455	0.818	0.438	0.764	0.413	0.684
62	0.462	0.832	0.446	0.777	0.420	0.695
64	0.471	0.847	0.454	0.790	0.427	0.708
66	0.479	0.863	0.462	0.805	0.435	0.721
68	0.489	0.879	0.471	0.820	0.443	0.735
70	0.497	0.896	0.479	0.836	0.451	0.748
72	0.507	0.914	0.488	0.853	0.460	0.763
74	0.517	0.933	0.498	0.871	0.468	0.779
76	0.527	0.954	0.508	0.890	0.478	0.796
78	0.539	0.976	0.519	0.910	0.489	0.814
80	0.552	1.000	0.531	0.932	0.500	0.833
82	0.566	1.025	0.545	0.955	0.513	0.855
84	0.581	1.052	0.559	0.981	0.526	0.877
86	0.598	1.083	0.576	1.010	0.542	0.903
88	0.617	1.120	0.595	1.044	0.559	0.934
90	0.639	1.161	0.616	1.082	0.579	0.967
92	0.663	1.206	0.639	1.124	0.601	1.004
94	0.694	1.261	0.669	1.175	0.629	1.050
96	0.742	1.339	0.715	1.249	0.673	1.118
98	0.786	1.409	0.757	1.315	0.714	1.179
100	0.838	1.534	0.807	1.437	0.762	1.278

For purposes of calculating actual annual emissions, the annual data in Table 1 have been curve-fitted based on an equation of the form $E_f = ap^2 + bp + c$, where p = vol% ethanol (e.g., 20% = 0.20). The constants for the equation are as follows:

Constants for Emission Factor Correlation

$E_f = ap^2 + bp + c$

p = volume percentage ethanol

Southern Region			
Concentration Range	**a**	**b**	**c**
0 to 24%	-0.45139	1.0958	0
>24 to 66%	-0.47357	1.0088	0.019486
>66% to 92%	1.5279	-1.7467	0.97149
>92% to 100%	6.7857	-10.819	4.8713
Central Region			
Concentration Range	**a**	**b**	**c**
0 to 24%	-0.45139	1.0542	0
>24 to 66%	-0.45117	0.96968	0.018554
>66% to 92%	1.5254	-1.7662	0.96812
>92% to 100%	6.4286	-10.223	4.6016
Northern Region			
Concentration Range	**a**	**b**	**c**
0 to 24%	-0.38194	0.97917	0
>24 to 66%	-0.42159	0.91316	0.016237
>66% to 92%	1.3799	-1.5774	0.87906
>92% to 100%	6.6071	-10.651	4.8061

The mathematical correlation for concentrations up to 24% provides a slightly conservative estimate of the emission factor relative to the data in Table 1 based on smoothing the impact of the linear interpolation process employed in development of the ethanol/water data base used for modeling wine tank emissions in EPA Tanks 4.0. Mathematical correlations for concentrations greater than 24% are based on a least square analysis of the data in Table 1.

Use of Table I and correlations to estimate emissions insulated wine storage tank subject to ambient temperature is demonstrated by the following examples:

Example 1 (wine storage tank with daily and annual throughput limits and maximum ethanol content) – estimate the potential to emit for an insulated 100,000 gallon nominal capacity steel storage tank to store wine with maximum concentration of 14 vol% ethanol . Maximum daily throughput is one tank turn or 100,000 gallons/day. Maximum annual throughput will be 600,000 gallons per year. The tank will be installed in a facility located in the Southern Region.

For a storage tank located in the Southern Region and handling up to 14% ethanol, the annual emission factor is 0.143 lb-VOC/1000 gallons throughput and the daily emission factor is 0.273 lb-VOC/1000 gallons throughput.

Daily PE = 100,000 gallons/day x 0.273 lb-VOC/1000 gallons = 27.3 lb-VOC/day

Annual PE = 600,000 gallons/year x 0.143 lb-VOC/1000 gallons = 86 lb-VOC/year

DEL conditions for this example would be:

- *Ethanol content of wine in this tank shall not exceed 14.0 percent by volume. [District Rule 2201]*
- *Tank throughput shall not exceed either of the following limits: 100,000 gallons in any one day or 600,000 gallons per year. [District Rule 2201]*

Example 2 (wine and spirits storage tank subject to a daily throughput limit and an SLC limit on annual emissions)– – estimate the potential to emit for an insulated 100,000 gallon nominal capacity steel storage tank to store spirits with maximum concentration of 80 vol% ethanol. Maximum allowed annual emissions for the tanks in the SLC are 10,000 lb/year. Maximum daily throughput is one tank turn or 100,000 gallons/day. The tank will be installed in a facility located in the Northern Region.

For a storage tank located in the Northern Region and handling up to 80% ethanol, the daily emission factor is 0.833 lb-VOC/1000 gallons throughput. Since the annual emissions are constrained by the SLC, an annual emission factor is not needed for the PE calculation but will be placed on the permit for purposes of demonstrating annual compliance on an ongoing basis. Since the ethanol concentration can vary from 0% to 80%, three separate correlation equations are required to cover the potential range:

For concentration p = 0 – 24%: $E_f = ap^2 + bp + c$

a = -0.38194
b = 0.97917
c = 0

For concentration p = 24% < p < 66%: $E_f = ap^2 + bp + c$

a = -0.42159
b = 0.91316
c = 0.016237

For concentration p = 66% < p < 80%: $E_f = ap^2 + bp + c$

a = 1.3799
b = -1.5774
c = 0.87906

Daily PE = 100,000 gallons/day x 0.833 lb-VOC/1000 gallons = 83.3 lb-VOC/day

DEL conditions for this example would be:

- *Ethanol content of wine or spirits in this tank shall not exceed 80.0 percent by volume. [District Rule 2201]*
- *Tank throughput shall not exceed 100,000 gallons in any one day. [District Rule 2201]*
- *Combined annual VOC emissions from all wine storage operations under permit units X-XXXX-XXX through X-XXXX-XXX shall not exceed 10,000 pounds per year. [District Rule 2201]*
- *Combined annual VOC emissions from wine storage operations under permit units X-XXXX-XXX through X-XXXX-XXX shall be determined as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit. [District Rule 2201]*
- *The annual VOC wine storage emission factor for each wine or spirits 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 1000 gallons of wine throughput; and P is the volume percent ethanol of the wine being transferred. For concentrations up to and including 24 volume %,* a = -0.38194, b = 0.97917 and c = 0. *For concentrations greater than 24 volume % up to and including 66 volume%* , a = -0.42159, b = 0.91316 and c = 0.016237. *For concentrations greater than 66 volume % up to and including 80 volume %,* a = 1.3799, b = -1.5774 and c = 0.87906. *[District Rule 2201]*

Wine Fermentation Tanks

During the wine fermentation process, sugar in the grape juice reacts with yeast to form alcohol (ethanol) and carbon dioxide (CO_2) gas. Ethanol is emitted into the atmosphere through evaporation. According to Williams and Boulton[1], the only important mechanism for ethanol loss is equilibrium evaporation into the escaping CO_2 stream. The physical entrainment of ethanol droplets in the CO_2 gas is insignificant in modern enclosed fermentation vessels. These researchers' model indicates that as fermentation temperature increases, ethanol loss increases exponentially. Since red wines are fermented at significantly higher temperatures than white wine, a different emission factor is required for each case.

Annual Fermentation Emission Factors

The California Air Resources Board (CARB) has established annual emission factors for fermentation of both red and white wines, based on the computer model developed by Williams and Boulton. The emission factors were developed for purposes of emission

[1] L.A. Williams and R. Boulton, Modeling and Prediction of Evaporative Ethanol Loss During Wine Fermentation, American Journal of Enology and Vitriculture, 32:234-242, (1983).

inventory estimation and represent a typical wine fermentation operation based on average fermentation temperatures and average initial sugar concentrations (°Brix) and are presented in Emissions Inventory Procedural Manual, Section 5.1, Air Resources Board, 1997. These factors have been adopted by the District in Rule 4694, *Wine Fermentation and Storage Tanks*. The established factors are as follows:

Red Wine Fermentation:	6.2 lb-VOC/1000 gallons fermented per year (78 °F fermentation temperature, 21.8 °Brix)
White Wine Fermentation:	2.5 lb-VOC/1000 gallons fermented per year (58 °F fermentation temperature, 20.4 °Brix)

Daily Fermentation Emission Factors

The District has developed factors for daily Potential to Emit using the previously-referenced research by Williams and Boulton (see Appendix A). To ensure the factors represent true Potential to Emit, the daily emission factors were developed based on typical maximum fermentation temperatures and starting sugar concentrations rather than average values:

Red Wine Fermentation:	3.46 lb-VOC/1000 gallons tank capacity per day (85 °F fermentation temperature, 22.5 °Brix)
White Wine Fermentation:	1.62 lb-VOC/1000 gallons tank capacity per day (70 °F fermentation temperature, 22.5 °Brix)

Example 3 (fermentation tank) - estimate the daily and annual potential to emit for a 200,000 gallon nominal capacity fermentation tank to exclusively ferment red wine. Maximum fermentation throughput will be 900,000 gallons red wine per year. The tank will not be used for storage.

Daily $PE_{fermentation}$ = 3.46 lb-VOC/day per 1000 gallons nominal tank capacity x 200 Mgal nominal

Daily $PE_{fermentation}$ = 692.1 lb/day

Daily PE = Daily $PE_{fermentation}$ = 692.1 lb/day

Annual PE = 6.2 lb-VOC per 1000 gallons fermented x 900 Mgal/year = 5,580 lb-VOC/yr

Example 5 (fermentation and storage tank) - estimate the daily and annual potential to emit for a 100,000 gallon nominal capacity fermentation tank to ferment red wine. Maximum fermentation throughput will be 450,000 gallons red wine per year. The tank will also be used for storage identical with example 1:

In this case,

Daily PE = the larger of either Daily $PE_{fermentation}$ or Daily $PE_{storage}$

And.

Annual PE = Annual $PE_{fermentation}$ + Annual $PE_{storage}$

Calculating the Daily PE:

Daily $PE_{fermentation}$ = 3.46 lb-VOC/day per 1000 gallons nominal tank capacity x 100 Mgal nominal

Daily $PE_{fermentation}$ = 346.0 lb-VOC/day

From example 1,

Daily $PE_{storage}$ = 27.3 lb-VOC/day

Therefore,

Daily PE = 346.0 lb/day

Calculating the Annual PE:

Annual $PE_{fermentation}$ = 6.2 lb-VOC per 1000 gallons fermented x 450 Mgal/year = 2,790 lb-VOC/yr

From example 1,

Annual $PE_{storage}$ = 97 lb-VOC/year

Therefore,

Annual PE = 2,790 + 97 = 2,887 lb/year

Appendix A

Daily Emission Factor for Wine Fermentation

Appendix A

The emission factor for daily PE is based on the following:

- Estimation of maximum daily fermentation emissions is based on Figure 7 from the Williams and Boulton work referenced in the body of this document.
- Maximum red wine fermentation temperature is assumed to be 85 °F.
- Maximum white wine fermentation temperature is assumed to be 70 °F.
- Maximum working capacity of a red wine fermenter is 80% of tank maximum capacity.
- Maximum working capacity of a white wine fermenter is 95% of tank maximum capacity.

Figure 7 from Williams and Boulton indicates the ethanol emission rate (mg per hour per liter of wine) versus time for various fermentation temperatures. The total emissions in mg per liter of wine for any time period is the area under the curve. Thus, for any given temperature, figure 7 can be graphically integrated over the 24 hour period during which maximum emissions occur. A copy of figure 7 is attached which indicates the integration interval for red wine (85 °F) and for white wine (70 °F). Results of integration of Figure 7 are presented in the following table:

Graphical Integration Results to Determine Daily Fermentation Emission Factor from Figure 7 of Williams and Boulton

	Red Wine	White Wine
Maximum 24 hour Emissions (mg/liter of wine per day)	518.6	203.9
Maximum 24 hour Emissions (1b/1000 gallons of wine per day)	4.33	1.70
Maximum Batch Size (% of Tank Capacity)	80%	95%
Daily Emission Factor (lb/1000 gallons tank capacity per day)	3.46	1.62

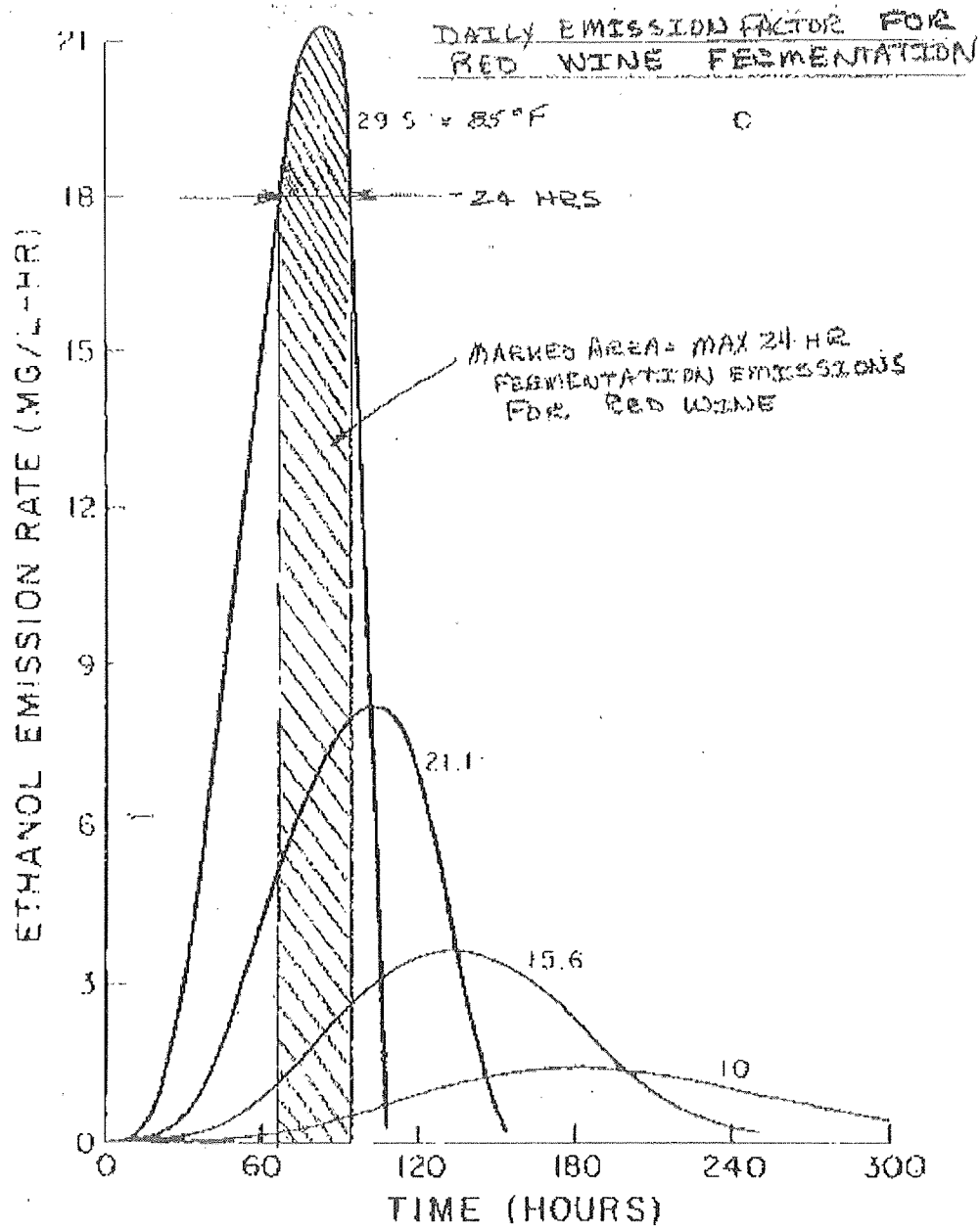


Fig. 7. The influence of fermentation temperature on a) the fermentation rate, b) the vapor phase ethanol concentration, and c) the rate of ethanol emission. (Initial sugar content of 22.5°Brix, isothermal fermentation at indicated temperature.)

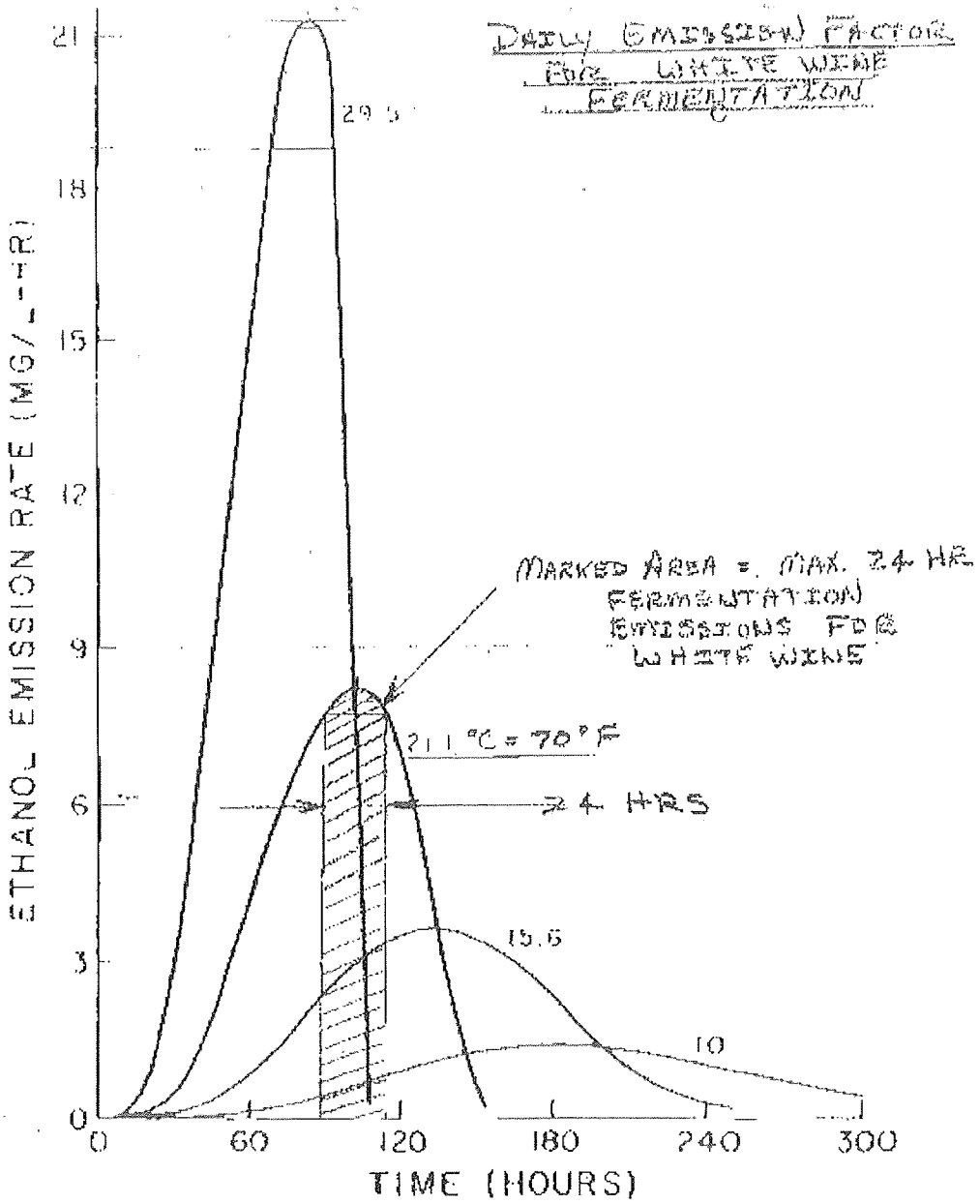


Fig. 7. The influence of fermentation temperature on a) the fermentation rate, b) the vapor phase ethanol concentration, and c) the rate of ethanol emission. (Initial sugar content of 22.5°Brix, isothermal fermentation at indicated temperature.)