



OCT 18 2011

Mr. Phil Castro
E&J Gallo Winery
5610 E Olive Ave
Fresno, CA 93727

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # C-447
Project # C-1110475**

Dear Mr. Castro:

Enclosed for your review is the District's analysis of an application for Authorities to Construct for the facility identified above. The applicant is requesting that Certificates of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The applicant proposes to install twenty-four new 640,000 gallon wine storage tanks.

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

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

Thank you for your cooperation in this matter.

Sincerely,



David Warner
Director of Permit Services

Enclosures

c: Stanley Tom, Permit Services

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)
1980 E. Gettysburg Avenue
Fresno, CA 93726-0244
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Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
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San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT



HEALTHY AIR LIVING™

OCT 18 2011

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

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # C-447
Project # C-1110475**

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authorities to Construct for E&J Gallo Winery 5610 E Olive Avenue, Fresno, which has been issued a Title V permit. E&J Gallo Winery is requesting that Certificates of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. The applicant proposes to install twenty-four new 640,000 gallon wine storage tanks.

Enclosed is the engineering evaluation of this application with a copy of the current Title V permit and proposed Authorities to Construct # ATC # C-447-271-0 through '294-0 with Certificates of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 45-day comment period that begins on the date you receive this letter. If you have any questions, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

Enclosures

c: Stanley Tom, Permit Services

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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OCT 18 2011

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

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # C-447
Project # C-1110475**

Dear Mr. Tollstrup:

Enclosed for your review is the District's analysis of an application for Authorities to Construct for the facility identified above. The applicant is requesting that Certificates of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The applicant proposes to install twenty-four new 640,000 gallon wine storage tanks.

Enclosed is the engineering evaluation of this application with a copy of the current Title V permit and proposed Authorities to Construct # ATC # C-447-271-0 through '294-0 with Certificates of Conformity. After demonstrating compliance with the Authorities to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 30-day comment period that begins on the date you receive this letter. If you have any questions, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

Enclosures
c: Stanley Tom, Permit Services

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Executive Director/Air Pollution Control Officer

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Fresno Bee

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

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control District solicits public comment on the proposed modification of E&J Gallo Winery for its wine production facility 5610 E Olive Avenue, Fresno, California. The applicant proposes to install twenty-four new 640,000 gallon wine storage tanks.

The District's analysis of the legal and factual basis for this proposed action, project #C-1110475, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. This will be the public's only opportunity to comment on the specific conditions of the modification. If requested by the public, the District will hold a public hearing regarding issuance of this modification. For additional information, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900. Written comments on the proposed initial permit must be submitted within 30 days of the publication date of this notice to DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 1990 E. GETTYSBURG AVE, FRESNO, CA 93726-0244.

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

Facility Name:	E & J Gallo Winery	Date:	September 12, 2011
Mailing Address:	5610 E Olive Ave Fresno, CA 93727	Engineer:	Stanley Tom
Contact Person:	Phil Castro	Lead Engineer:	Joven Refuerzo
Telephone:	(559) 458-2588		
Fax:	(559) 458-2410		
Application #(s):	C-447-271-0 through '294-0		
Project #:	C-1110475		
Deemed Complete:	April 19, 2011		

I. Proposal

E & J Gallo Winery has requested Authority to Construct (ATC) permits for the installation of twenty-four new 640,000 gallon stainless steel wine storage tanks. These tanks will be used strictly for wine storage.

E & J Gallo Winery has received their Title V Permit. This modification can be classified as a Title V significant modification pursuant to Rule 2520, Section 3.20, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. E & J Gallo Winery must apply to administratively amend their Title V Operating Permit to include the requirements of the ATCs issued with this project.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (12/18/08)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99)
Rule 4002	National Emissions Standards for Hazardous Air Pollutants (5/20/04)
Rule 4102	Nuisance (12/17/92)
Rule 4694	Wine Fermentation and Storage Tanks (12/15/05)
CH&SC 41700	Health Risk Assessment
CH&SC 42301.6	School Notice
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)	
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines	

III. Project Location

The facility is located at 5610 E Olive Avenue in Fresno, CA. The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

Following the completion of fermentation, the wine is transferred directly to storage tanks. The grape skins from the red wine fermentation are sent to a press for recovery of contained wine which is also transferred to the wine storage tanks. Wine is stored year-round for bottling, typically under refrigeration. Further VOC emissions occur as a result of the storage tank operation.

V. Equipment Listing

C-447-271-0:	640,000 GALLON INSULATED STAINLESS (TANK X) WITH PRESSURE/VACUUM VALVE	STEEL	WINE	STORAGE	TANK
C-447-272-0:	640,000 GALLON INSULATED STAINLESS (TANK X) WITH PRESSURE/VACUUM VALVE	STEEL	WINE	STORAGE	TANK
C-447-273-0:	640,000 GALLON INSULATED STAINLESS (TANK X) WITH PRESSURE/VACUUM VALVE	STEEL	WINE	STORAGE	TANK
C-447-274-0:	640,000 GALLON INSULATED STAINLESS (TANK X) WITH PRESSURE/VACUUM VALVE	STEEL	WINE	STORAGE	TANK
C-447-275-0:	640,000 GALLON INSULATED STAINLESS (TANK X) WITH PRESSURE/VACUUM VALVE	STEEL	WINE	STORAGE	TANK
C-447-276-0:	640,000 GALLON INSULATED STAINLESS (TANK X) WITH PRESSURE/VACUUM VALVE	STEEL	WINE	STORAGE	TANK
C-447-277-0:	640,000 GALLON INSULATED STAINLESS (TANK X) WITH PRESSURE/VACUUM VALVE	STEEL	WINE	STORAGE	TANK
C-447-278-0:	640,000 GALLON INSULATED STAINLESS (TANK X) WITH PRESSURE/VACUUM VALVE	STEEL	WINE	STORAGE	TANK
C-447-279-0:	640,000 GALLON INSULATED STAINLESS (TANK X) WITH PRESSURE/VACUUM VALVE	STEEL	WINE	STORAGE	TANK
C-447-280-0:	640,000 GALLON INSULATED STAINLESS (TANK X) WITH PRESSURE/VACUUM VALVE	STEEL	WINE	STORAGE	TANK
C-447-281-0:	640,000 GALLON INSULATED STAINLESS (TANK X) WITH PRESSURE/VACUUM VALVE	STEEL	WINE	STORAGE	TANK
C-447-282-0:	640,000 GALLON INSULATED STAINLESS (TANK X) WITH PRESSURE/VACUUM VALVE	STEEL	WINE	STORAGE	TANK
C-447-283-0:	640,000 GALLON INSULATED STAINLESS (TANK X) WITH PRESSURE/VACUUM VALVE	STEEL	WINE	STORAGE	TANK
C-447-284-0:	640,000 GALLON INSULATED STAINLESS (TANK X) WITH PRESSURE/VACUUM VALVE	STEEL	WINE	STORAGE	TANK
C-447-285-0:	640,000 GALLON INSULATED STAINLESS (TANK X) WITH PRESSURE/VACUUM VALVE	STEEL	WINE	STORAGE	TANK

C-447-286-0:	640,000 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK X) WITH PRESSURE/VACUUM VALVE
C-447-287-0:	640,000 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK X) WITH PRESSURE/VACUUM VALVE
C-447-288-0:	640,000 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK X) WITH PRESSURE/VACUUM VALVE
C-447-289-0:	640,000 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK X) WITH PRESSURE/VACUUM VALVE
C-447-290-0:	640,000 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK X) WITH PRESSURE/VACUUM VALVE
C-447-291-0:	640,000 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK X) WITH PRESSURE/VACUUM VALVE
C-447-292-0:	640,000 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK X) WITH PRESSURE/VACUUM VALVE
C-447-293-0:	640,000 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK X) WITH PRESSURE/VACUUM VALVE
C-447-294-0:	640,000 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK X) WITH PRESSURE/VACUUM VALVE

VI. Emission Control Technology Evaluation

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

VII. General Calculations

A. Assumptions

- All new tanks may only be used for storage of red or white wine.
- Typically, for enclosed tanks with refrigeration and/or insulation (or equivalent) and P/V valves, breathing losses from storage of wine are assumed to be negligible.

B. Emission Factors

Tanks 4.0 will be used to calculate the emissions from the new tanks. Only storage emissions will be calculated in this project.

- Storage tanks C-447-271-0 through '294-0 Daily Storage Throughput = 640,000 gallons/day (per applicant)
- Storage tanks C-447-271-0 through '294-0 Annual Storage Throughput = 4,480,235 gallons/year (per applicant)
- Storage tanks C-447-271-0 through '294-0 maximum storage temperature = 60 °F
- Post-project annual average ethanol content of stored wine is 12%.

C. Calculations

1. Pre-Project Potential to Emit (PE1)

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

2. Post Project Potential to Emit (PE2)

The new wine tanks will be used for storage only. Two Tanks 4.0 runs have been performed one using a throughput of 640,000 gallons/day to calculate the daily post-project potential to emit by dividing the month of July emissions by the number of days in the month and one using 4,480,235 gallons/year to calculate the annual post-project potential to emit. See Appendix A for the Tanks 4.0 runs for each tank.

Tank	Daily PE2 (lb-VOC/day)	Annual PE2 (lb-VOC/yr)
C-447-271-0	130.4	462
C-447-272-0	130.4	462
C-447-273-0	130.4	462
C-447-274-0	130.4	462
C-447-275-0	130.4	462
C-447-276-0	130.4	462
C-447-277-0	130.4	462
C-447-278-0	130.4	462
C-447-279-0	130.4	462
C-447-280-0	130.4	462
C-447-281-0	130.4	462
C-447-282-0	130.4	462
C-447-283-0	130.4	462
C-447-284-0	130.4	462
C-447-285-0	130.4	462
C-447-286-0	130.4	462
C-447-287-0	130.4	462
C-447-288-0	130.4	462
C-447-289-0	130.4	462
C-447-290-0	130.4	462
C-447-291-0	130.4	462
C-447-292-0	130.4	462
C-447-293-0	130.4	462
C-447-294-0	130.4	462
Total		11,088

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

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

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

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

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

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

5. Major Source Determination

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.

6. Baseline Emissions (BE)

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

Pursuant to Section 3.7 of District Rule 2201, BE = Pre-project Potential to Emit for:

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

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to Section 3.22 of District Rule 2201.

The permit units in this project only emit VOC and therefore the BE determination is only required for this pollutant, as discussed in the following sections:

BE VOC

New Wine Tanks (N-1665-497-0 through '506-0)

Since this is a new emissions unit, BE = PE1 = 0 for all pollutants.

7. SB 288 Major Modification

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

As discussed in Section VII.C.5 above, the facility is an existing Major Source for VOC; however, the project by itself would need to be a significant increase in order to trigger a Major Modification. The emissions units within this project do not have a total potential to emit which is greater than Major Modification thresholds (see table below). Therefore, the project cannot be a significant increase and the project does not constitute a Major Modification.

SB 288 Major Modification Thresholds (Existing Major Source)			
Pollutant	Project PE (lb/year)	Threshold (lb/year)	Major Modification?
VOC	11,088	50,000	No

8. Federal Major Modification

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

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

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

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

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

Net Emission Increase for New Units (NEI_N)

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

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

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

$$NEI_N = PE_{2N}$$

where PE_{2N} is the Post Project Potential to Emit for the new emissions units.

$$NEI_N = PE_{2N} = 462 \text{ lb-VOC/year} \times 24 \text{ tanks} = 11,088 \text{ lb-VOC/year}$$

The NEI for this project is thus calculated as follows:

$$NEI = NEI_N$$

$$NEI = 11,088 \text{ lb-VOC/year}$$

The NEI for this project will be greater than the federal Major Modification threshold of 0 lb-VOC/year. Therefore, this project does not qualify for a "Less-Than-Significant Emissions Increase" exclusion and is thus determined to be a Federal Major Modification for VOC.

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

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

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

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

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

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

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

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

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

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

d. Major Modification

As discussed in Section VII.C.7 above, this project does constitute a Major Modification for VOC emissions; therefore BACT is triggered for VOC for the new wine tanks.

2. BACT Guideline

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

3. Top-Down BACT Analysis

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

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

VOC: Insulated tank, pressure/vacuum valve set within 10% of the maximum allowable working pressure of the tank, "gas tight" tank operation and achieve and maintain a continuous storage temperature not exceeding 75 °F within 60 days of completion of fermentation.

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

- When used for wine storage, this tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694]
- When this tank is used for wine storage, the pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21 [District Rules 2201 and 4694]
- The maximum surface liquid temperature of wine stored in this tank shall not exceed 60 degrees Fahrenheit. [District Rules 2201 and 4694, 5.2.2] Y

B. Offsets

1. Offset Applicability

Pursuant to Section 4.5.3, offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the Post Project Stationary Source Potential to Emit (SSPE2) equals to or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

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

2. Quantity of Offsets Required

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

Per Sections 4.7.1 and 4.7.3, the quantity of offsets in pounds per year for VOC is calculated as follows for sources with an SSPE1 greater than the offset threshold levels before implementing the project being evaluated.

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

Where,

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

BE = Baseline Emissions, (lb/year)

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

DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = Pre-project Potential to Emit for:

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

otherwise,

BE = Historic Actual Emissions (HAE)

There are no increases in cargo carrier emissions due to this project. Therefore,

Offsets Required (lb/year) = $\Sigma[PE2 - BE] \times DOR$

Tank	Annual PE2 (lb-VOC/yr)	Annual BE (lb-VOC/yr)
C-447-271-0	462	0
C-447-272-0	462	0
C-447-273-0	462	0
C-447-274-0	462	0
C-447-275-0	462	0
C-447-276-0	462	0
C-447-277-0	462	0
C-447-278-0	462	0
C-447-279-0	462	0
C-447-280-0	462	0
C-447-281-0	462	0
C-447-282-0	462	0
C-447-283-0	462	0
C-447-284-0	462	0
C-447-285-0	462	0
C-447-286-0	462	0
C-447-287-0	462	0
C-447-288-0	462	0
C-447-289-0	462	0
C-447-290-0	462	0
C-447-291-0	462	0
C-447-292-0	462	0
C-447-293-0	462	0
C-447-294-0	462	0

For each tank,

$$\begin{aligned} \text{Offsets Required (lb/year)} &= ([462 - 0]) \times \text{DOR} \\ &= 462 \text{ lb-VOC/year} \times \text{DOR} \end{aligned}$$

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

<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
115	115	116	116

Assuming an offset ratio of 1.5:1, the amount of VOC ERCs that need to be withdrawn is:

$$\begin{aligned} \text{Offsets Required (lb/year)} &= ([462 - 0]) \times 1.5] \\ &= 693 \text{ lb VOC/year} \end{aligned}$$

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

<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
173	173	173	174

For all tanks in this project,

$$\begin{aligned} \text{Offsets Required (lb/year)} &= ([462 - 0] \times 24) \times \text{DOR} \\ &= 11,088 \text{ lb-VOC/year} \times \text{DOR} \end{aligned}$$

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

<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
2,772	2,772	2,772	2,772

Assuming an offset ratio of 1.5:1, the amount of VOC ERCs that need to be withdrawn is:

$$\begin{aligned} \text{Offsets Required (lb/year)} &= ([462 - 0] \times 24) \times 1.5] \\ &= 16,632 \text{ lb VOC/year} \end{aligned}$$

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

<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
4,158	4,158	4,158	4,158

The applicant has stated that the facility plans to use ERC certificate C-1066-1 to offset the increases in VOC emissions associated with this project. The above certificate has available quarterly VOC credits as follows:

	<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
ERC #C-1066-1	17,500	17,500	17,500	17,500

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

Proposed Rule 2201 (offset) Conditions:

- Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 115 lb, 2nd quarter - 115 lb, 3rd quarter - 116 lb, and fourth quarter - 116 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 12/18/08). [District Rule 2201]
- ERC Certificate Number C-1066-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]

C. Public Notification

1. Applicability

Public noticing is required for:

- a. New Major Sources, Federal Major Modifications, and SB288 Major Modifications,
- b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- c. Any project which results in the offset thresholds being surpassed, and/or
- d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.

a. New Major Sources, Federal Major Modifications, and SB288 Major Modifications

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

As demonstrated in VII.C.7, this project is a Federal Major Modification for VOC; therefore, public noticing for Federal Major Modification purposes is required.

b. PE > 100 lb/day

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

PE > 100 lb/day Public Notice Thresholds			
Pollutant	PE2 (lb/day)	Public Notice Threshold	Public Notice Triggered?
VOC	130.4	100 lb/day	Yes

Therefore, public noticing for PE > 100 lb/day purposes is required.

c. Offset Threshold

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

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

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

d. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a Stationary Source Increase in Permitted Emissions (SSIPE) of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE is calculated as the Post Project Stationary Source Potential to Emit (SSPE2) minus the Pre-Project Stationary Source Potential to Emit (SSPE1), i.e. $SSIPE = SSPE2 - SSPE1$. The values for SSPE2 and SSPE1 are calculated according to Rule 2201, Sections 4.9 and 4.10, respectively. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table:

Stationary Source Increase in Permitted Emissions [SSIPE] – Public Notice					
Pollutant	ΣPE2 (lb/year)	ΣPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
VOC	11,088	0	11,088	20,000 lb/year	No

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

2. Public Notice Action

As discussed above, public noticing is required for this project for VOC emissions in excess of 100 lb/day and Federal Major Modification for VOC. 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 for this equipment.

D. Daily Emission Limits (DELs)

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.15 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.15.1 and 3.15.2, 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.

For all wine storage tank emissions units affected by this project, the DEL is stated in the form of a daily limit on tank throughput and a maximum ethanol content for wine stored in the tank.

Proposed Rule 2201 (DEL) Conditions:

- The average annual ethanol content of wine stored in this tank shall not exceed 12 percent by volume. [District Rule 2201]

- The maximum surface liquid temperature of wine stored in this tank shall not exceed 60 degrees Fahrenheit. [District Rules 2201 and 4694, 5.2.2]
- The maximum wine storage throughput in this tank shall not exceed 640,000 gallons per day. [District Rule 2201]
- Daily VOC emissions from wine stored in this tank shall not exceed 130.4 lb/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

No monitoring is required to demonstrate compliance with Rule 2201.

3. Recordkeeping

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

- The maximum surface liquid temperature of wine stored in this tank shall not exceed 60 degrees Fahrenheit. [District Rules 2201 and 4694, 5.2.2]
- The operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2]
- Daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201]
- All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694]

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis

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

G. Compliance Certification

Section 4.15.2 of this Rule requires the owner of a new Major Source or a source undergoing a Federal Major Modification to demonstrate to the satisfaction of the District that all other Major Sources owned by such person and operating in California are in compliance or are on a schedule for compliance with all applicable emission limitations and standards. As discussed in Sections VIII-Rule 2201-C.1.a and VIII-Rule 2201-C.1.b, this source is undergoing a Federal Major Modification, therefore this requirement is applicable. Included in Appendix C is E & J Gallo's compliance certification.

H. Alternative Siting Analysis

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

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

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

Rule 2520 Federally Mandated Operating Permits

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

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

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

Rule 4001 New Source Performance Standards (NSPS)

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60. However, no subparts of 40 CFR Part 60 apply to wine fermentation and storage tank operations.

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

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

Rule 4102 Nuisance

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

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

California Health & Safety Code 41700 (Health Risk Assessment)

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

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

District Rule 4694 Wine Fermentation and Storage Tanks

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

Section 5.1 requires the winery operator achieve Required Annual Emissions Reductions (RAER) equal to at least 35% of the winery's Baseline Fermentation Emissions (BFE). Per the definition of

RAER in Section 3.25 of the Rule, the RAER may be achieved by any combination of Fermentation Emission Reductions (FER), Certified Emission Reductions (CER) or District Obtained Emission Reductions (DOER) as established in the facility's District-approved Rule 4694 Compliance Plan, due every three years on December 1st beginning in 2006. The facility has submitted the required plan to the District and is currently satisfying the required emission reductions in the form of Certified Emission Reductions.

The following condition on the facility-wide permit (unit 0-1) ensures compliance:

- This facility shall annually achieve the Required Annual Emission Reductions (RAER) as specified in the facility's APCO-approved Three-Year Compliance Plan for District Rule 4694. [District Rule 4694]

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

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

The following conditions will be placed on the permits for stainless steel tanks \geq 5,000 gallons in capacity to ensure compliance with the requirements of Section 5.2.1:

- 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]
- 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]

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

The following condition will be placed on the permits for stainless steel tanks \geq 5,000 gallons in capacity to ensure compliance with the requirements of Section 5.2.2:

- The maximum surface liquid temperature of wine stored in this tank shall not exceed 60 degrees Fahrenheit. [District Rules 2201 and 4694, 5.2.2]

Every three years, Section 6.1 and 6.2 require the facility to submit a Three-Year Compliance Plan and a Three-Year Compliance Plan Verification respectively. Section 6.3 requires that an Annual Compliance Plan Demonstration be submitted to the District no later than February 1 of each year to show compliance with the applicable requirements of the Rule. Section 6.4.3 requires that all monitoring be performed for any Certified Emission Reductions as identified in the facility's Three-Year Compliance Plan and that the records of all monitoring be maintained.

The following conditions on the facility-wide permit (unit 0-1) ensure compliance:

- By December 1, 2006, and every three years thereafter, the winery operator subject to the requirements of Section 5.1 shall submit to the District a three-year compliance plan that demonstrates compliance with the applicable requirements of District Rule 4694 for each year of the applicable compliance period. The three-year compliance plan shall include all the information specified in sections 6.1.1 through 6.1.8 of the rule. [District Rule 4694, 6.1]
- By July 1, 2007, and every three years thereafter, the winery operator shall submit to the District a three-year compliance plan verification that demonstrates that the three-year compliance plan elements are in effect. The compliance plan verification shall include all the information specified in sections 6.2.1 through 6.2.5 of District Rule 4694. [District Rule 4694, 6.2]
- By February 1, 2008, and every year thereafter, the winery operator shall submit to the District an annual compliance plan demonstration that shows compliance with the applicable requirements of District Rule 4694. The compliance plan demonstration shall include all the information specified in sections 6.3.1 through 6.3.7 of the rule. All additional Required Annual Emissions Reductions (RAER) shall be obtained by April 1 of the year of the Annual Compliance Demonstration, per section 6.3.7.2 of the rule. [District Rule 4694, 6.3]
- Operators using CER to mitigate fermentation emissions shall perform all monitoring and recordkeeping, as established in their approved Three-Year Compliance Plan, and shall maintain all records necessary to demonstrate compliance. [District Rule 4694]

Section 6.4.2 requires that weekly records be kept of wine volume and temperature in each storage tank. The following conditions will be placed on the permit for each storage tank to ensure compliance with the requirements of Section 6.4.2:

- The operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2]

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

- 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] N

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)

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

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

The City of Fresno (City) is the public agency having principal responsibility for approving the Project. As such, the City served as the Lead Agency for the project. Pursuant to Section 21157.1 of the California Public Resources Code (California Environmental Quality Act), the City prepared an Initial Study to evaluate the proposed project in accordance with land use and environmental policies and provisions of the City's General Plan. The City made the following findings and proposes to adopt a Finding of Conformity for this project:

- The project is fully within the scope of the Master Environmental Impact Report (MEIR) prepared for the General Plan;
- The project will not general additional significant environmental effects not previously examined in the MEIR; and
- No new or additional mitigation measures or alternatives are required.

The District is a Responsible Agency for the project because of its discretionary approval power over the project via its Permits Rule (Rule 2010) and New Source Review Rule (Rule 2201), (CEQA Guidelines §15381). As a Responsible Agency the District complies with CEQA by considering the Initial Study and Finding of Conformity prepared by the Lead Agency, and by reaching its own conclusion on whether and how to approve the project (CEQA Guidelines §15096).

The District's engineering evaluation of the project (this document) demonstrates that compliance with District rules and permit conditions would reduce Stationary Source emissions from the project to levels below the District's thresholds of significance for criteria pollutants. The District's

engineering evaluation of the project (this document) demonstrates that compliance with District rules and permit conditions would reduce Stationary Source emissions from the project to levels below the District's thresholds of significance for criteria pollutants. The District's proposed approval of the project is being circulated for public comment concurrent with the CEQA process to eliminate avoidable delays. Consistent with CEQA requirements, if the Lead Agency approves the project, the District will review the Lead Agency's final environmental document and reach its conclusion on whether and how to approve the project.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Issue the proposed Authorities to Construct subject to the permit conditions on the attached draft Authorities to Construct in Appendix E.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
C-447-271-0	3020-05-F	640,000 gallons	\$301.00
C-447-272-0	3020-05-F	640,000 gallons	\$301.00
C-447-273-0	3020-05-F	640,000 gallons	\$301.00
C-447-274-0	3020-05-F	640,000 gallons	\$301.00
C-447-275-0	3020-05-F	640,000 gallons	\$301.00
C-447-276-0	3020-05-F	640,000 gallons	\$301.00
C-447-277-0	3020-05-F	640,000 gallons	\$301.00
C-447-278-0	3020-05-F	640,000 gallons	\$301.00
C-447-279-0	3020-05-F	640,000 gallons	\$301.00
C-447-280-0	3020-05-F	640,000 gallons	\$301.00
C-447-281-0	3020-05-F	640,000 gallons	\$301.00
C-447-282-0	3020-05-F	640,000 gallons	\$301.00
C-447-283-0	3020-05-F	640,000 gallons	\$301.00
C-447-284-0	3020-05-F	640,000 gallons	\$301.00
C-447-285-0	3020-05-F	640,000 gallons	\$301.00
C-447-286-0	3020-05-F	640,000 gallons	\$301.00
C-447-287-0	3020-05-F	640,000 gallons	\$301.00
C-447-288-0	3020-05-F	640,000 gallons	\$301.00
C-447-289-0	3020-05-F	640,000 gallons	\$301.00
C-447-290-0	3020-05-F	640,000 gallons	\$301.00
C-447-291-0	3020-05-F	640,000 gallons	\$301.00
C-447-292-0	3020-05-F	640,000 gallons	\$301.00
C-447-293-0	3020-05-F	640,000 gallons	\$301.00
C-447-294-0	3020-05-F	640,000 gallons	\$301.00

XI. Appendices

- A: Tanks 4.0 Calculations
- B: BACT Guideline 5.4.13 and Top Down BACT Analysis
- C: Compliance Certification
- D: Certificate of Conformity
- E: Draft ATCs

Appendix A

Tanks 4.0 Calculations

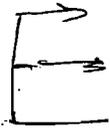
EMISSIONS

TANKS 4.0

Chemical Data Report

Revised Emission Modeling Rec'd 4/15/11

Chemical Name Category	CAS	Molecular Weight		Density	Vapor Pressure (psia) at Temperature (degrees F)						Constants for Antoine's Equation			REID (psia)	ASTM Slope	
		Liquid	Vapor		40	50	60	70	80	90	100	Line 1: degrees C A	Line 2: degrees K B			C
Wine 12.0 % Method #2 Organic Liquids		19.16	25.89	8.13	0.16	0.23	0.34	0.48	0.69	0.96	1.33					
Wine 23.9% Method #2 Organic Liquids		20.51	30.43	7.93	0.20	0.29	0.42	0.59	0.83	1.15	1.57					



Vapor pressures are consistent with interpolated data from The Critical Tables.

- Based on maximum temp. rather than average

Daily PE = 130.4 lb
Annual PE = 461 / tank
24 Tanks Total

DEL's

Max daily throughput = 680,000 gal
Max Annual " = 4,448,235 gal
Average Ethanol = 12% max Vol
Max Ethanol = 23.9 % Vol.
Maximum Tank Temp = 60°F

$$ERC's = \frac{(1.5)(24)(461)}{4} = 4149 \text{ lb/gtr}$$

Reserved on C-1066-1

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	Tank YYY (4-11-2011) Daily
City:	Fresno
State:	California
Company:	E & J Gallo
Type of Tank:	Vertical Fixed Roof Tank
Description:	The tank is a new 640,000 gallon, stainless steel, domed top, insulated wine tank. The exterior color is white. PV valve setting +0.03/-0.03. Tank numbers will be provided later. 24 tanks to be built. this report is for one tank.

Tank Dimensions

Shell Height (ft):	40.00
Diameter (ft):	52.00
Liquid Height (ft) :	40.00
Avg. Liquid Height (ft):	40.00
Volume (gallons):	640,000.00
Turnovers:	31.00
Net Throughput(gal/yr):	19,840,000.00
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:	Dome
Height (ft)	5.00
Radius (ft) (Dome Roof)	52.00

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meteorological Data used in Emissions Calculations: Fresno, California (Avg Atmospheric Pressure = 14.56 psia)

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

Tank YYY (4-11-2011) Daily - Vertical Fixed Roof Tank
Fresno, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.	Max.		Avg.	Min.	Max.					
Wine 23.9% Method #2	Jul	60.00	60.00	60.00	60.00	0.4200	0.4200	0.4200	30.4300			20.51	Option 1: VP60 = .42 VP70 = .59
* Unidentified Components						2.1164	-0.5591	2.1164	46.1436	0.1993	0.6697	46.64	
Water						0.2570	0.2570	0.2570	18.0000	0.8007	0.3303	18.00	Option 1: VP60 = .257029 VP70 = .362915

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Tank YYY (4-11-2011) Daily - Vertical Fixed Roof Tank
Fresno, California

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):							0.0000					
Vapor Space Volume (cu ft):							5,374.7414					
Vapor Density (lb/cu ft):							0.0023					
Vapor Space Expansion Factor:							0.0000					
Vented Vapor Saturation Factor:							0.9467					
Tank Vapor Space Volume:												
Vapor Space Volume (cu ft):							5,374.7414					
Tank Diameter (ft):							52.0000					
Vapor Space Outage (ft):							2.5308					
Tank Shell Height (ft):							40.0000					
Average Liquid Height (ft):							40.0000					
Roof Outage (ft):							2.5308					
Roof Outage (Dome Roof)												
Roof Outage (ft):							2.5308					
Dome Radius (ft):							52.0000					
Shell Radius (ft):							26.0000					
Vapor Density												
Vapor Density (lb/cu ft):							0.0023					
Vapor Molecular Weight (lb/lb-mole):							30.4300					
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):							0.4200					
Daily Avg. Liquid Surface Temp. (deg. R):							519.6700					
Daily Average Ambient Temp. (deg. F):							81.8500					
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):							10.731					
Liquid Bulk Temperature (deg. R):							519.6700					
Tank Paint Solar Absorptance (Shell):							0.1700					
Tank Paint Solar Absorptance (Roof):							0.1700					
Daily Total Solar Insulation Factor (Btu/sqft day):							2,551.4853					
Vapor Space Expansion Factor												
Vapor Space Expansion Factor (deg. R):							0.0000					
Daily Vapor Temperature Range (deg. R):							0.0000					
Daily Vapor Pressure Range (psia):							0.0000					
Breather Vent Press. Setting Range (psia):							0.0600					
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):							0.4200					
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):							0.4200					
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):							0.4200					
Daily Avg. Liquid Surface Temp. (deg R):							519.6700					
Daily Min. Liquid Surface Temp. (deg R):							519.6700					
Daily Max. Liquid Surface Temp. (deg R):							519.6700					
Daily Ambient Temp. Range (deg. R):							33.5000					
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:							0.9467					
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):							0.4200					
Vapor Space Outage (ft):							2.5308					
Working Losses (lb):							6,037.3120					
Vapor Molecular Weight (lb/lb-mole):							30.4300					
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):							0.4200					
Net Throughput (gal/mo.):							19,840,000.0000					
Annual Turnovers:							31.0000					
Turnover Factor:							1.0000					
Maximum Liquid Volume (gal):							640,000.0000					
Maximum Liquid Height (ft):							40.0000					

Tank Diameter (ft):
Working Loss Product Factor:

52.0000
1.0000

Total Losses (lb):

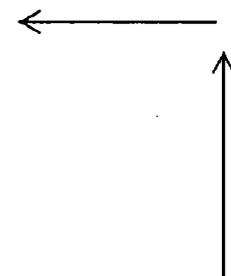
6,037.3120

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

Emissions Report for: January, February, March, April, May, June, July, August, September, October, November, December

Tank YYY (4-11-2011) Daily - Vertical Fixed Roof Tank
 Fresno, California

Components	Losses(lbs)		
	Working Loss	Breathing Loss	Total Emissions
Wine 23.9% Method #2	6,037.31	0.00	6,037.31
Unidentified Components	4,043.38	0.00	4,043.38
Water	1,993.93	0.00	1,993.93



$$30.43 = y(46.02) + (1-y)18.02$$

$$= 28y_a = 12.41$$

$$y_a = .4432$$

$$E_{10H} = \frac{4,043.38}{31} = 130.5 \text{ OK}$$

Emissions 4043.38 Pounds
 Daily Emissions
 $4043.38/31=130.4$ pounds

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	Tank YYY (4-11-2011) Annual
City:	Fresno
State:	California
Company:	E & J Gallo
Type of Tank:	Vertical Fixed Roof Tank
Description:	The tank is a new 640,000 gallon, stainless steel, domed top, insulated wine tank. The exterior color is white. PV valve setting +0.03/-0.03. Tank numbers will be provided later. 24 tanks to be built. this report is for one tank.

Tank Dimensions

Shell Height (ft):	40.00
Diameter (ft):	52.00
Liquid Height (ft) :	40.00
Avg. Liquid Height (ft):	40.00
Volume (gallons):	640,000.00
Turnovers:	7.00
Net Throughput(gal/yr):	4,448,235.00
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:	Dome
Height (ft)	5.00
Radius (ft) (Dome Roof)	52.00

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meteorological Data used in Emissions Calculations: Fresno, California (Avg Atmospheric Pressure = 14.56 psia)

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

**Tank YYY (4-11-2011) Annual - Vertical Fixed Roof Tank
Fresno, California**

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.	Max.		Avg.	Min.	Max.					
Wine 12.0 % Method #2	Jan	60.00	60.00	60.00	60.00	0.3400	0.3400	0.3400	25.8900			19.16	Option 1: VP60 = .34 VP70 = .48
Unidentified Components						2.3605	-3.8986	2.3605	46.8112	0.0976	0.4951	47.41	
Water	Feb	60.00	60.00	60.00	60.00	0.2570	0.2570	0.2570	18.0000	0.9024	0.5049	18.00	Option 1: VP60 = .257029 VP70 = .362915
Unidentified Components						2.3605	-3.8986	2.3605	46.8112	0.0976	0.4951	47.41	
Water	Mar	60.00	60.00	60.00	60.00	0.2570	0.2570	0.2570	18.0000	0.9024	0.5049	18.00	Option 1: VP60 = .257029 VP70 = .362915
Unidentified Components						2.3605	-3.8986	2.3605	46.8112	0.0976	0.4951	47.41	
Water	Apr	60.00	60.00	60.00	60.00	0.3400	0.3400	0.3400	25.8900			19.16	Option 1: VP60 = .34 VP70 = .48
Unidentified Components						2.3605	-3.8986	2.3605	46.8112	0.0976	0.4951	47.41	
Water	May	60.00	60.00	60.00	60.00	0.2570	0.2570	0.2570	18.0000	0.9024	0.5049	18.00	Option 1: VP60 = .257029 VP70 = .362915
Unidentified Components						2.3605	-3.8986	2.3605	46.8112	0.0976	0.4951	47.41	
Water	Jun	60.00	60.00	60.00	60.00	0.3400	0.3400	0.3400	25.8900			19.16	Option 1: VP60 = .34 VP70 = .48
Unidentified Components						2.3605	-3.8986	2.3605	46.8112	0.0976	0.4951	47.41	
Water	Jul	60.00	60.00	60.00	60.00	0.2570	0.2570	0.2570	18.0000	0.9024	0.5049	18.00	Option 1: VP60 = .257029 VP70 = .362915
Unidentified Components						2.3605	-3.8986	2.3605	46.8112	0.0976	0.4951	47.41	
Water	Aug	60.00	60.00	60.00	60.00	0.3400	0.3400	0.3400	25.8900			19.16	Option 1: VP60 = .34 VP70 = .48
Unidentified Components						2.3605	-3.8986	2.3605	46.8112	0.0976	0.4951	47.41	
Water	Sep	60.00	60.00	60.00	60.00	0.2570	0.2570	0.2570	18.0000	0.9024	0.5049	18.00	Option 1: VP60 = .257029 VP70 = .362915
Unidentified Components						2.3605	-3.8986	2.3605	46.8112	0.0976	0.4951	47.41	
Water	Oct	60.00	60.00	60.00	60.00	0.3400	0.3400	0.3400	25.8900			19.16	Option 1: VP60 = .34 VP70 = .48
Unidentified Components						2.3605	-3.8986	2.3605	46.8112	0.0976	0.4951	47.41	
Water	Nov	60.00	60.00	60.00	60.00	0.2570	0.2570	0.2570	18.0000	0.9024	0.5049	18.00	Option 1: VP60 = .257029 VP70 = .362915
Unidentified Components						2.3605	-3.8986	2.3605	46.8112	0.0976	0.4951	47.41	
Water	Dec	60.00	60.00	60.00	60.00	0.3400	0.3400	0.3400	25.8900			19.16	Option 1: VP60 = .34 VP70 = .48
Unidentified Components						2.3605	-3.8986	2.3605	46.8112	0.0976	0.4951	47.41	
Water						0.2570	0.2570	0.2570	18.0000	0.9024	0.5049	18.00	Option 1: VP60 = .257029 VP70 = .362915

TANKS 4.0.9d Emissions Report - Detail Format Detail Calculations (AP-42)

**Tank YYY (4-11-2011) Annual - Vertical Fixed Roof Tank
Fresno, California**

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vapor Space Volume (cu ft):	5,374.7414	5,374.7414	5,374.7414	5,374.7414	5,374.7414	5,374.7414	5,374.7414	5,374.7414	5,374.7414	5,374.7414	5,374.7414	5,374.7414
Vapor Density (lb/cu ft):	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016
Vapor Space Expansion Factor:	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vented Vapor Saturation Factor:	0.9564	0.9564	0.9564	0.9564	0.9564	0.9564	0.9564	0.9564	0.9564	0.9564	0.9564	0.9564
Tank Vapor Space Volume:												
Vapor Space Volume (cu ft):	5,374.7414	5,374.7414	5,374.7414	5,374.7414	5,374.7414	5,374.7414	5,374.7414	5,374.7414	5,374.7414	5,374.7414	5,374.7414	5,374.7414
Tank Diameter (ft):	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000
Vapor Space Outage (ft):	2.5308	2.5308	2.5308	2.5308	2.5308	2.5308	2.5308	2.5308	2.5308	2.5308	2.5308	2.5308
Tank Shell Height (ft):	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000
Average Liquid Height (ft):	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000
Roof Outage (ft):	2.5308	2.5308	2.5308	2.5308	2.5308	2.5308	2.5308	2.5308	2.5308	2.5308	2.5308	2.5308
Roof Outage (Dome Roof)												
Roof Outage (ft):	2.5308	2.5308	2.5308	2.5308	2.5308	2.5308	2.5308	2.5308	2.5308	2.5308	2.5308	2.5308
Dome Radius (ft):	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000
Shell Radius (ft):	26.0000	26.0000	26.0000	26.0000	26.0000	26.0000	26.0000	26.0000	26.0000	26.0000	26.0000	26.0000
Vapor Density												
Vapor Density (lb/cu ft):	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016
Vapor Molecular Weight (lb/lb-mole):	25.8900	25.8900	25.8900	25.8900	25.8900	25.8900	25.8900	25.8900	25.8900	25.8900	25.8900	25.8900
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400
Daily Avg. Liquid Surface Temp. (deg. R):	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700
Daily Average Ambient Temp. (deg. F):	45.7500	51.1000	55.0000	61.2000	68.9500	76.5500	81.8500	80.2500	74.4500	65.2000	53.6000	45.4000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg. R):	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700
Tank Paint Solar Absorptance (Shell):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Tank Paint Solar Absorptance (Roof):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	668.1706	1,022.2439	1,488.6308	1,992.7729	2,390.9467	2,566.7143	2,551.4853	2,279.5850	1,860.7886	1,369.9719	851.5527	592.3431
Vapor Space Expansion Factor												
Vapor Space Expansion Factor:	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Daily Vapor Temperature Range (deg. R):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Daily Vapor Pressure Range (psia):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Breather Vent Press. Setting Range (psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400
Daily Avg. Liquid Surface Temp. (deg R):	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700
Daily Min. Liquid Surface Temp. (deg R):	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700
Daily Max. Liquid Surface Temp. (deg R):	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700	519.6700
Daily Ambient Temp. Range (deg. R):	16.7000	21.2000	23.2000	27.8000	30.5000	32.3000	33.5000	32.9000	31.3000	29.0000	22.2000	16.6000
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:	0.9564	0.9564	0.9564	0.9564	0.9564	0.9564	0.9564	0.9564	0.9564	0.9564	0.9564	0.9564
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400
Vapor Space Outage (ft):	2.5308	2.5308	2.5308	2.5308	2.5308	2.5308	2.5308	2.5308	2.5308	2.5308	2.5308	2.5308
Working Losses (lb):	77.6905	77.6905	77.6905	77.6905	77.6905	77.6905	77.6905	77.6905	77.6905	77.6905	77.6905	77.6905
Vapor Molecular Weight (lb/lb-mole):	25.8900	25.8900	25.8900	25.8900	25.8900	25.8900	25.8900	25.8900	25.8900	25.8900	25.8900	25.8900
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400	0.3400
Net Throughput (gal/mo.):	370,686.2500	370,686.2500	370,686.2500	370,686.2500	370,686.2500	370,686.2500	370,686.2500	370,686.2500	370,686.2500	370,686.2500	370,686.2500	370,686.2500
Annual Turnovers:	7.0000	7.0000	7.0000	7.0000	7.0000	7.0000	7.0000	7.0000	7.0000	7.0000	7.0000	7.0000
Turnover Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Maximum Liquid Volume (gal):	640,000.0000	640,000.0000	640,000.0000	640,000.0000	640,000.0000	640,000.0000	640,000.0000	640,000.0000	640,000.0000	640,000.0000	640,000.0000	640,000.0000
Maximum Liquid Height (ft):	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000

Tank Diameter (ft):	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	77.6905	77.6905	77.6905	77.6905	77.6905	77.6905	77.6905	77.6905	77.6905	77.6905	77.6905	77.6905

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

Emissions Report for: January, February, March, April, May, June, July, August, September, October, November, December

Tank YYY (4-11-2011) Annual - Vertical Fixed Roof Tank
 Fresno, California

Components	Losses(lbs)		
	Working Loss	Breathing Loss	Total Emissions
Wine 12.0 % Method #2	932.29	0.00	932.29
Unidentified Components	461.62	0.00	461.62
Water	470.67	0.00	470.67

→ Ethanol

$$25.89 = y_a(46.02) + (1 - y_a)(18.02)$$

$$28y_a = 7.87$$

$$y_a = .2811$$

$$\rho_v = 8.13 \text{ lb/gal}$$

$$MW_v = 19.16$$

$$MW_v = 25.89$$

$$932.29 \text{ lb} \times \frac{1 \text{ mol}}{25.89 \text{ lb}} \times \frac{.2811 \text{ mol EtOH}}{\text{mol Vapor}} \times \frac{46.02 \text{ lb EtOH}}{\text{mol EtOH}}$$

$$= 465.8 \quad \text{OK}$$

Appendix B

BACT Guideline 5.4.13 and Top Down BACT Analysis

[Per » B A C T » Bact Guideline.asp?category Level1=5&category Level2=4&category Level3=13&last Update=10 » 6 :](#)

INSTRUCTIONS: click on "Details" for Permit Specific BACT Determinations.

[Back](#) [Details Page](#)

**Best Available Control Technology (BACT) Guideline 5.4.13
Last Update: 10/6/2009**

Wine Storage Tank

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

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

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

This is a Summary Page for this Class of Source - Permit Specific BACT Determinations on Details Page.

Top Down BACT Analysis for VOC Emissions:

Step 1 - Identify All Possible Control Technologies

The SJVUAPCD BACT Clearinghouse guideline 5.4.13, 2nd quarter 2011, 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, 2nd quarter 2011, 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 of diurnal temperature variations. Tanks made entirely of non-conducting materials such as concrete and wood (except for fittings) are considered self-insulating.*

Step 2 - Eliminate Technologically Infeasible Options

None of the above listed technologies are technologically infeasible.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Rank by Control Effectiveness		
Rank	Control	Overall Capture and Control Efficiency ¹
1	Capture of VOCs and thermal or catalytic oxidation or equivalent	98%
2	Capture of VOCs and carbon adsorption or equivalent	95%
3	Capture of VOCs and absorption or equivalent	90%
4	Capture of VOCs and condensation or equivalent	70%
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	0%

¹ Relative to "industry standard".

Step 4 - Cost Effectiveness Analysis

A cost-effective analysis is performed for each control technology which is more effective than meeting the requirements of District Rule 4694 plus tank insulation (achieved-in-practice BACT), as proposed by E & J Gallo.

Maximum Vapor Flow Rate

The following calculation only examines working losses from the tanks and is therefore conservative. The Tanks 4.0 daily emission run is based on one turnover per day for each tank during the month of July. This means each tank is filled for 12 hours and emptied for 12 hours. This fill rate is conservative as shown in the calculation below. Typical pumps utilized are rated at 20 hp.

Flow rate from a 20 hp pump:

Motor efficiency 90%

Pump Efficiency 60%

Differential pressure at pump = 10 psi (assume psi dynamic losses in piping plus 5 psi for static head difference on average)

Brake horsepower for a centrifugal pump may be calculated by the following equation.

$$\text{BHP} = \frac{\text{Diferential Pressure (psi)} \times \text{gallons per minute}}{1,713 \times \text{Efficiency}}$$

BHP for a 20 hp motor = 20 hp x 90% = 18 bhp

Solving for the flow in gallons per minute (GPM),

$$\text{GPM} = (18 \times 1,713 \times 60\%)/(10) = 1,850 \text{ gpm}$$

$$640,000 \text{ gallons} \times \text{min}/1,850 \text{ gallons} \times 1 \text{ hr}/60 \text{ min} = 5.77 \text{ hours}$$

Therefore, assuming a 12 hour fill rate for a 640,000 gallon tank is conservative.

$$\begin{aligned} \text{Moles of air displaced} &= 640,000 \text{ gallons} \times \text{ft}^3/7.48 \text{ gallons} \times 0.07544 \text{ lb-air/ft}^3 \times \text{lb/mol}/28.58 \text{ lb} \\ &= 225.8 \text{ lb-mol air} \end{aligned}$$

$$\text{Tanks 4.0 Water emissions} = 1993.93 \text{ lb} + 31 \text{ days} = 64.3 \text{ lb}$$

$$\text{Tanks 4.0 Ethanol emissions} = 4043.38 \text{ lb} + 31 \text{ days} = 130.4 \text{ lb}$$

$$\text{Moles Water} = 64.3 \text{ lb} \times \text{lb-mol}/18 \text{ lb} = 3.57 \text{ lb-mol}$$

$$\text{Moles Ethanol} = 130.4 \text{ lb} \times \text{lb-mol}/46 \text{ lb} = 2.83 \text{ lb-mol}$$

$$\text{Total moles} = 225.8 + 3.57 + 2.83 = 232.2 \text{ lb-mol}$$

$$V = nRT/P = 232.2 \text{ lb-mol} \times 0.7302 \text{ lb-mol } ^\circ\text{R/atm ft}^3 \times 520 \text{ } ^\circ\text{R} / 1 \text{ atm} \\ = 88181.9 \text{ ft}^3$$

$$\text{Vapor Flow Rate} = 88181.9 \text{ ft}^3 / 12 \text{ hours} \times 1 \text{ hour}/60 \text{ min} = 122.5 \text{ scfm}$$

If a control device is sized at this value it would be undersized. The flow rate for filling one tank is 640,000 gallon / 12 hours = 53,333 gph. In a group of 24 tanks it is likely that one tank will not be filled at 122.5 scfm, but about six tanks (25% of the total) could be filled at a more typical rate of 25,000 gph. Six tanks filling at 25,000 gph each would be a total fill rate of 150,000 gph. Therefore, a control device should be sized approximately three times 122.5 scfm or 368 scfm.

Collection System Capital Investment (based on ductwork)

A common feature of all thermal or catalytic 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. The analysis below indicates that these options are not cost effective by showing that just the annualized direct cost for the ductwork of the collection system and supporting structural steel and foundations and the control devices themselves is too large, when considered at the District's cost effectiveness threshold for VOC BACT, to justify the capital investment required by these options.

Collection system to consist of:

- The collection system consists of stainless steel place ductwork (stainless steel is required due to food grade product status) with isolation valving, connecting twenty-four 640,000 gallon tanks to a common manifold system which ducts the combined vent to the common control device. The cost of dampers and isolation valving, installed in the ductwork, will 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. The main header is twelve inches diameter to handle the potential for simultaneous venting.

Capital Cost Ductwork

An estimate of straight line duct lengths required was prepared based on a winery layout of twenty-four 640,000 gallon tanks. As a worst case scenario, the tanks will be placed in two groups of twelve with each group arranged in two rows of six.

6" Stainless Steel Duct: 1,656 linear feet
12" Stainless Steel Duct: 656 linear feet

A direct cost estimate for 12 inch diameter stainless steel ductwork, installed in a San Joaquin Valley winery, was taken from Fermenter VOC Emission Control Cost Estimate, prepared by Eichleay Engineering for the Wine Institute in conjunction with development of District Rule 4694. The estimate is based on 2nd quarter 2005 dollars, and includes fittings, miscellaneous duct supports and other materials plus field labor costs required to install the ductwork, but does not

include other associated indirect costs such as construction management, engineering, owner's cost, contingency, etc.

Unit installed cost for 6 inch Stainless Steel ducting: \$61.30/linear foot
Unit installed cost for 12 inch Stainless Steel ducting: \$143.80/linear foot

Installed costs = (\$61.30 linear foot x 1656 feet) + (\$143.80 linear foot x 656 feet) = \$195,846

Adjusting from 2005 dollars to 2011 dollars (multiply by 1.165, 2.75% inflation/yr).

Installed costs = \$195,846 x 1.165 = \$228,161

Duct Valve Allowance

One of the major concerns of a manifold duct system is micro organisms spoiling the wine, and transferring from one tank to another. It is possible to completely ruin a tank of white win if a few hundred gallons of red wine were back fed through the duct. 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.

Unit installed cost for 6 inch butterfly valve = \$2,125/valve

Unit installed cost one foot removable spool = \$500/tank

Installed costs = (\$2,125/valve x 24 tanks) + (\$500/tank x 24 tanks) = \$63,000

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 operation of the CIP system has not been estimated. Operation of a CIP system, using typical cleaning agents, will raise disposal and wastewater treatment costs.

An allowance of \$200,000 for a CIP system is included in the evaluation. Per applicant, this value is consistent with typical bottling systems.

Installed costs = \$200,000

Total costs = Ductwork + Duct Valve + CIP System
= \$228,161 + \$63,000 + \$200,000
= \$491,161

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,

$$\text{Annualized Capital Investment} = \$491,161 \times 0.163 = \$80,059$$

Capture of VOCs and condensation (>70% collection & control)

Design Basis

- A common refrigeration system will be installed for all twenty-four tanks.
- The refrigeration system will be a packaged single-stage vapor-compression system.
- Minimum refrigeration capacity will allow cooling one of the twenty-four tanks from 75 °F to 40 °F in 24 hours. This would be a conservatively small system with respect to cost effectiveness since it would effectively limit the filling of the twenty-four tanks to one tank per day.

Based on a specific heat capacity of 1.0 Btu/lb-°F and cooling one tank from 75 °F to 40 °F in 24 hours, the capacity required for the refrigeration system would be:

$$\begin{aligned} \text{Refrigeration Capacity} &= 640,000 \text{ gal/day} \times 8.34 \text{ lb/gal} \times 1.0 \text{ Btu/lb-}^\circ\text{F} \times (75^\circ\text{F} - 40^\circ\text{F}) \\ &\quad \times (\text{day}/24 \text{ hours}) \times (1 \text{ ton-hr refrigeration}/12,000 \text{ Btu}) \end{aligned}$$

$$\text{Refrigeration Capacity} = 649 \text{ tons}$$

Capital Cost

The EPA Air Pollution Control Manual, Section 3, Chapter 2, Table 2.5, provides costs for single stage vapor compression systems up to 100 tons capacity at a condensation temperature of 40 °F. Conservatively, using the purchase price for a 100 ton unit yields:

$$\text{Refrigeration System Cost} = \$140,000$$

$$\text{Annualized Capital Investment} = \text{Initial Capital Investment} \times \text{Amortization Factor}$$

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

Therefore,

$$\text{Annualized Capital Investment} = \$140,000 \times 0.163 = \$22,820$$

To compare the cost and size of a 100 ton condenser to the subject 649 ton condenser, the six-tenths rule of thumb is used.

$$\text{Annualized Costs } 649 \text{ ton} = \text{Annualized Costs } 100 \text{ ton} \times \left(\frac{649 \text{ ton}}{100 \text{ ton}} \right)^{0.6}$$

$$\begin{aligned}\text{Annualized Costs } 649 \text{ ton} &= \$22,820 \times (649 \div 100)^{0.6} \\ &= \$70,091/\text{year}\end{aligned}$$

$$\text{Total Annual Cost} = \$70,091 + \$80,059 = \$150,150$$

$$\begin{aligned}\text{Annual Emission Reduction} &= \text{Uncontrolled Emissions} \times 0.70 \\ &= 11,088 \text{ lb-VOC/year} \times 0.70 \\ &= 7,762 \text{ lb-VOC/year} \\ &= 3.88 \text{ tons-VOC/year}\end{aligned}$$

$$\begin{aligned}\text{Cost Effectiveness} &= \$150,150/\text{year} \div 3.88 \text{ tons-VOC/year} \\ &= \$38,698/\text{ton-VOC}\end{aligned}$$

The analysis demonstrates that the annualized purchase cost of the required condenser and collection system ductwork equipment alone results in a cost effectiveness which exceeds the District's Guideline of \$17,500/ton-VOC.

Collection of VOCs and control by absorption (>90% collection & control)

The tanks in this project will be located in two different areas. There will be two groups of 12 tanks. Two scrubbers will be required sized at half the maximum vapor flow rate or 184 scfm. However, the cost of one scrubber at the maximum vapor flow rate will be used as a conservative estimate.

Water scrubber (750 cfm) capital cost = \$108,500 (per 2003 budgetary pricing obtained by Sonoma Technologies)

Adjusting from 2003 dollars to 2011 dollars (multiply by 1.22, 2.75% inflation/yr).

Water scrubber (750 cfm) capital cost = \$108,500 x 1.22 = \$132,370

$$\text{Capital Cost } 368 \text{ cfm} = \text{Capital Cost } 750 \text{ cfm} \times \left(\frac{368 \text{ cfm}}{750 \text{ cfm}} \right)^{0.6}$$

$$\begin{aligned}\text{Capital Cost } 368 \text{ cfm} &= \$132,370 \times (368 \div 750)^{0.6} \\ &= \$88,583\end{aligned}$$

The following cost data is taken from EPA Control Cost Manual, Sixth Edition (EPA/452/B-02-001).

Water Scrubber – Cost Estimate	
Cost Description	Cost (\$)
Direct Costs (DC)	
Base Equipment Costs (Water Scrubber)	88,583
Instrumentation	$0.10 \times 88,583 = 8,858$
Sales Tax	$0.03 \times 88,583 = 2,657$
Freight	$0.05 \times 88,583 = 4,429$
Purchased equipment cost	104,527
Foundations & supports	$0.08 \times 104,527 = 8,362$
Handling & erection	$0.14 \times 104,527 = 14,634$
Electrical	$0.04 \times 104,527 = 4,181$
Piping	$0.02 \times 104,527 = 2,091$
Painting	$0.01 \times 104,527 = 1,045$
Insulation	$0.01 \times 104,527 = 1,045$
Direct installation costs	31,358
Total Direct Costs	135,885
Indirect Costs (IC)	
Engineering	$0.10 \times 104,527 = 10,453$
Construction and field expenses	$0.05 \times 104,527 = 5,226$
Contractor fees	$0.10 \times 104,527 = 10,453$
Start-up	$0.02 \times 104,527 = 2,091$
Performance test	$0.01 \times 104,527 = 1,045$
Contingencies	$0.03 \times 104,527 = 3,136$
Total Indirect Costs	32,404
Total Capital Cost (DC + IC)	168,289

Annualized Capital Investment = Total Capital Cost x Amortization Factor

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

Therefore,

$$\text{Annualized Capital Investment} = \$168,289 \times 0.163 = \$27,431$$

Additionally, the water scrubber will generate ethanol-laden wastewater containing 4.9896 tons-ethanol annually. Assuming a 2% solution, approximately 75,372 gallons of waste water (4.9896 ton-ethanol/year x 2000 lb/ton x gal/6.62 lb ÷ 0.02) will be generated annually. Per estimate in Sonoma Technologies study, an allowance of \$0.25 per gallon is applied for disposal costs.

$$\text{Annual disposal costs} = 75,372 \text{ gallons} \times \$0.25/\text{gallon} = \$18,843$$

$$\text{Total Annual Cost} = \$27,431 + \$18,843 + \$80,059 = \$126,333$$

$$\begin{aligned} \text{Annual Emission Reduction} &= \text{Uncontrolled Emissions} \times 0.90 \\ &= 11,088 \text{ lb-VOC/year} \times 0.90 \\ &= 9,979 \text{ lb-VOC/year} \\ &= 4.9896 \text{ tons-VOC/year} \end{aligned}$$

$$\begin{aligned} \text{Cost Effectiveness} &= \$126,333/\text{year} \div 4.9896 \text{ tons-VOC/year} \\ &= \$25,319/\text{ton-VOC} \end{aligned}$$

The analysis demonstrates that the annualized purchase cost of the required water scrubber, wastewater disposal costs, and collection system ductwork equipment alone results in a cost effectiveness which exceeds the District's Guideline of \$17,500/ton-VOC.

Collection of VOCs and control by carbon adsorption (95% collection and control)

$$\begin{aligned} \text{Annual Emission Reduction} &= \text{Uncontrolled Emissions} \times 0.95 \\ &= 11,088 \text{ lb-VOC/year} \times 0.95 \\ &= 10,534 \text{ lb-VOC/year} \\ &= 5.2668 \text{ tons-VOC/year} \end{aligned}$$

Assume a working bed capacity of 20% for carbon (weight of vapor per weight of carbon)

$$\begin{aligned} \text{Carbon required} &= 5.2668 \text{ tons-VOC/year} \times 2000 \text{ lb/ton} \times 1/0.20 \\ &= 52,668 \text{ lb carbon} \end{aligned}$$

$$\text{Carbon capital cost} = \$1.00/\text{lb} = \$1.00/\text{lb} \times 52,668 \text{ lb carbon} = \$52,668$$

The following cost data is taken from EPA Control Cost Manual, Sixth Edition (EPA/452/B-02-001).

Carbon Adsorption – Cost Estimate	
Cost Description	Cost (\$)
Direct Costs (DC)	
Base Equipment Costs (Carbon Material)	52,668
Instrumentation	0.10 x 52,668 = 5,267
Sales Tax	0.03 x 52,668 = 1,580
Freight	0.05 x 52,668 = 2,633
Purchased equipment cost	62,148
Foundations & supports	0.08 x 62,148 = 4,972
Handling & erection	0.14 x 62,148 = 8,701
Electrical	0.04 x 62,148 = 2,486
Piping	0.02 x 62,148 = 1,243
Painting	0.01 x 62,148 = 621
Insulation	0.01 x 62,148 = 621
Direct installation costs	18,644
Total Direct Costs	80,792
Indirect Costs (IC)	
Engineering	0.10 x 62,148 = 6,215
Construction and field expenses	0.05 x 62,148 = 3,107
Contractor fees	0.10 x 62,148 = 6,215
Start-up	0.02 x 62,148 = 1,243
Performance test	0.01 x 62,148 = 621
Contingencies	0.03 x 62,148 = 1,864
Total Indirect Costs	19,265
Total Capital Cost (DC + IC)	\$100,057

Annualized Capital Investment = Initial Capital Investment x Amortization Factor

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

Therefore,

Annualized Capital Investment = \$100,057 x 0.163 = \$16,309

Operation and Maintenance Cost

The operation and maintenance cost for this carbon adsorption system will only include the cost of the service to remove and replace the saturated carbon canisters.

A representative from United States Filter Corporation stated that carbon adsorption systems are able to control about 20% of their weight in VOC's. As shown above, the annual carbon requirement would be 52,668 pounds. A typical recommended system consists of 2-8,000 pound canisters connected in series. In order to ensure no breakthrough, a service would be required every time the primary system becomes saturated. Therefore, a service would be required six times per year (52,668 lb/yr/8,000 lb/canister).

Pursuant to the cost estimate received from United States Filter Corporation, the cost of the service to remove and replace a saturated carbon canister is \$8,720 per unit. This cost would include removal and replacement of the spent unit, packaging of the unit, shipping of the unit to the reactivation facility and reactivation of the unit.

Therefore, the annual service cost can be calculated as follows:

Service Cost = Occurrence (service/year) x Cost (\$/service)
Service Cost = 6 services/year x \$8,720 /service = **\$52,320/year**

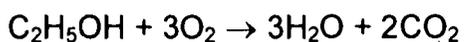
Total Annual Cost = \$16,309 + \$52,320 + \$80,059 = \$148,688/year

Cost Effectiveness = \$148,688/year ÷ 5.2668 tons-VOC/year
= \$28,231/ton-VOC

The analysis demonstrates that the annualized purchase cost of the required carbon and collection system ductwork equipment alone results in a cost effectiveness which exceeds the District's Guideline of \$17,500/ton-VOC.

Collection of VOCs and control by thermal or catalytic oxidation (>98% collection & control)

The balanced chemical equation for combustion of ethanol is shown below.



The equilibrium vapor from a distilled spirits tank contains 72 vol % ethanol. As shown above, the maximum vapor flow rate is 384 scfm.

The tanks in this project will be located in two different areas. There will be two groups of 12 tanks. Two thermal oxidizers will be required sized at half the maximum vapor flow rate or 184 scfm. However, the cost of one thermal oxidizer at the maximum vapor flow rate will be used as a conservative estimate.

Regenerative thermal oxidizer (5,700 cfm) capital cost = \$279,000 (2005 dollars)

Adjusting from 2005 dollars to 2011 dollars (multiply by 1.165, 2.75% inflation/yr).

Regenerative thermal oxidizer (5,700 cfm) capital cost = \$279,000 x 1.165 = \$325,035

$$\text{Capital Cost } 368 \text{ cfm} = \text{Capital Cost } 5700 \text{ cfm} \times \left(\frac{368 \text{ cfm}}{5700 \text{ cfm}} \right)^{0.6}$$

$$\begin{aligned} \text{Capital Cost } 368 \text{ cfm} &= \$325,035 \times (368 \div 5700)^{0.6} \\ &= \$62,793 \end{aligned}$$

Operation and Maintenance Costs

The Direct annual costs include labor (operating, supervisory, and maintenance), maintenance materials, electricity, and fuel.

Heat of Combustion for waste gas stream -dh(c):

$$\begin{aligned} \text{heat of combustion -dHc} &= 20276 \text{ Btu/lb} \\ \text{Daily VOC emissions rate} &= 130.4 \times 24 = 3129.6 \text{ lb/day} \\ \text{Blower flow rate} &= 368 \text{ scfm} \\ &= 529,920 \text{ ft}^3/\text{day} \end{aligned}$$

$$\begin{aligned} -dh(c) &= 3129.6 \text{ lb/day} \times 20276 \text{ Btu/lb} / 529,920 \text{ ft}^3/\text{day} \\ &= 119.75 \text{ Btu/ft}^3 \end{aligned}$$

Assuming the waste gas is principally air, with a molecular weight of 28.97 and a corresponding density of 0.0739 lb/scf, the heat of combustion per pound of incoming waste gas is:

$$\begin{aligned} -dh(c) &= 119.75 \text{ Btu/ft}^3 / 0.0739 \text{ lb/ft}^3 \\ &= 1,620.38 \text{ Btu/lb} \end{aligned}$$

Fuel Flow Requirement

$$Q(\text{fuel}) = \frac{P_w \cdot Q_w \cdot \{C_p \cdot [1.1T_f - T_w - 0.1T_r] - [-dh(c)]\}}{P(\text{ef}) \cdot [-dh(m) - 1.1 C_p \cdot (T_f - T_r)]}$$

Where

$$\begin{aligned}
 P_w &= 0.0739 \text{ lb/ft}^3 \\
 C_p &= 0.255 \text{ Btu/lb-F} \\
 Q_w &= 368 \text{ scfm} \\
 -dh(m) &= 21,502 \text{ Btu/lb for methane} \\
 T_r &= 77 \text{ F assume ambient conditions} \\
 P(ef) &= 0.0408 \text{ lb/ft}^3 \text{ m, methane at } 77^\circ\text{F, 1 atm} \\
 T_f &= 1600^\circ\text{F} \\
 T_w &= 1150^\circ\text{F} \\
 -dh(c) &= 1,620.38 \text{ Btu/lb}
 \end{aligned}$$

$$\begin{aligned}
 Q &= \frac{0.0739 \cdot 368 \cdot \{0.255 \cdot [1.1 \cdot 1600 - 1150 - 0.1 \cdot 77] - 1,620.38\}}{0.0408 \cdot [21502 - 1.1 \cdot 0.255 \cdot (1600 - 77)]} \\
 &= 39889.74 / 859.9 = 46.39 \text{ ft}^3/\text{min}
 \end{aligned}$$

$$\begin{aligned}
 \text{Fuel Cost} &= 46.39 \text{ cfm} \times (1 - 0.95 \text{ heat recovery}) \times 1440 \text{ min/day} \times 365 \text{ day/yr} \times \$0.00453/\text{ft}^3 \\
 &= \$5,523/\text{yr}
 \end{aligned}$$

Electricity Requirement

$$\text{Power}_{\text{fan}} = \frac{1.17 \cdot 10^{-4} \cdot Q_w \cdot \Delta P}{\epsilon}$$

Where

$$\begin{aligned}
 \Delta P &= \text{Pressure drop Across system} = 4 \text{ in. H}_2\text{O} \\
 \epsilon &= \text{Efficiency for fan and motor} = 0.6 \\
 Q_w &= 368 \text{ scfm}
 \end{aligned}$$

$$\begin{aligned}
 \text{Power}_{\text{fan}} &= \frac{1.17 \cdot 10^{-4} \cdot 368 \text{ cfm} \cdot 4 \text{ in. H}_2\text{O}}{0.60} \\
 &= 0.287 \text{ kW}
 \end{aligned}$$

$$\text{Electricity Cost} = 0.287 \text{ kW} \times 24 \text{ hr/day} \times 365 \text{ days/yr} \times \$0.168/\text{kWh} = \$422/\text{yr}$$

The following cost data is taken from EPA Control Cost Manual, Sixth Edition (EPA/452/B-02-001).

Thermal and Catalytic Incinerator – Cost Estimate	
Cost Description	Cost (\$)
Direct Costs (DC)	
Base Equipment Costs (Incinerator)	62,793
Instrumentation	$0.10 \times 62,793 = 6,279$
Sales Tax	$0.03 \times 62,793 = 1,884$
Freight	$0.05 \times 62,793 = 3,140$
Purchased equipment cost	74,096
Foundations & supports	$0.08 \times 74,096 = 5,928$
Handling & erection	$0.14 \times 74,096 = 10,373$
Electrical	$0.04 \times 74,096 = 2,964$
Piping	$0.02 \times 74,096 = 1,482$
Painting	$0.01 \times 74,096 = 741$
Insulation	$0.01 \times 74,096 = 741$
Direct installation costs	22,229
Total Direct Costs	96,325
Indirect Costs (IC)	
Engineering	$0.10 \times 74,096 = 7,410$
Construction and field expenses	$0.05 \times 74,096 = 3,705$
Contractor fees	$0.10 \times 74,096 = 7,410$
Start-up	$0.02 \times 74,096 = 1,482$
Performance test	$0.01 \times 74,096 = 741$
Contingencies	$0.03 \times 74,096 = 741$
Total Indirect Costs	21,489
Total Capital Cost (DC + IC)	\$117,814

Annualized Capital Investment = Total Capital Cost x Amortization Factor

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

Therefore,

$$\text{Annualized Capital Investment} = \$117,814 \times 0.163 = \$19,204$$

Operating Labor			
Operator	0.5 h/shift	\$20.00/h	\$5,550
Supervisor	15% of operator		\$833
Maintenance			
Labor	0.5 h/shift	\$20.00	\$5,550
Material	100% of labor		\$5,550
Utility			
Natural Gas		\$4.53/kft ³	\$5,523
Electricity		\$0.168/kWh	\$422
Indirect Annual Cost (IC)			
Overhead	60% of Labor Cost		\$3,330
Administrative Charge	2% TCI		\$2,356
Property Taxes	1% TCI		\$1,178
Insurance	1% TCI		\$1,178
Total Annual Cost			\$31,470

$$\text{Total Annual Costs} = \$19,204 + \$31,470 + \$80,059 = \$130,733/\text{year}$$

$$\begin{aligned} \text{Annual Emission Reduction} &= \text{Uncontrolled Emissions} \times 0.98 \\ &= 11,088 \text{ lb-VOC/year} \times 0.98 \\ &= 10,866 \text{ lb-VOC/year} \\ &= 5.433 \text{ tons-VOC/year} \end{aligned}$$

$$\begin{aligned} \text{Cost Effectiveness} &= \$130,733/\text{year} \div 5.433 \text{ tons-VOC/year} \\ &= \$24,063/\text{ton-VOC} \end{aligned}$$

The analysis demonstrates that the annualized purchase cost of the required thermal oxidizer, utilities, and collection system ductwork equipment alone results in a cost effectiveness which exceeds the District's Guideline of \$17,500/ton-VOC.

Step 5 - Select BACT

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

Appendix C

Compliance Certification

C-447
E&J Gallo Winery-Fresno
Compliance Certification Statement
For Federal Major Permit Modifications
Compliance with District Rule 2201, Section 4.15.2

“I certify under penalty of law that all major stationary sources (Title V facilities) operated under my control in California are compliant with all applicable air emissions limitations and standards. The facilities included in this certification statement include the E&J Gallo Winery-Fresno, the E&J Gallo Winery-Livingston, and the E&J Gallo Winery-Modesto.”



Mr. Steve Kidd
Vice President of Operations

02/28/11

Date

Appendix D

Certificate of Conformity

San Joaquin Valley
Unified Air Pollution Control District

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

Federal Major Permit MODIFICATION
 MINOR PERMIT MODIFICATION

ADMINISTRATIVE
AMENDMENT

COMPANY NAME: E&J Gallo Winery - Fresno	FACILITY ID C-447
1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: E&J Gallo Winery-Fresno	
3. Agent to the Owner: Mr. Phil Castro	

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

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

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



03/07/11

Signature of Responsible Official

Date

Mr. Phil Castro

Name of Responsible Official (please print)

Plant Manager - Fresno Winery

Title of Responsible Official (please print)

Mailing Address: Central Regional Office * 1990 E. Gettysburg Avenue * Fresno, California
93726-0244 * (559) 230-5900 * FAX (559) 230-6061

TVFORM-009
Rev: July 2005

Appendix E

Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-447-271-0

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY
MAILING ADDRESS: 5610 E OLIVE AVE
FRESNO, CA 93727

LOCATION: 5610 E OLIVE AVE
FRESNO, CA 93727

EQUIPMENT DESCRIPTION:
640,000 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK X) WITH PRESSURE/VACUUM VALVE

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 115 lb, 2nd quarter - 115 lb, 3rd quarter - 116 lb, and fourth quarter - 116 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 12/18/08). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Number C-1066-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DRAFT

DAVID WARNER, Director of Permit Services

C-447-271-0; Oct 17 2011 3:22PM - TOMS : Joint Inspection NOT Required

6. 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
7. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. The annual average ethanol content of wine stored in this tank shall not exceed 12 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The maximum surface liquid temperature of wine stored in this tank shall not exceed 60 degrees Fahrenheit. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The maximum wine storage throughput in this tank shall not exceed 640,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The maximum wine storage throughput in this tank shall not exceed 4,480,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Daily VOC emissions from wine stored in this tank shall not exceed 130.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2] Federally Enforceable Through Title V Permit
14. Daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-447-272-0

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY
MAILING ADDRESS: 5610 E OLIVE AVE
FRESNO, CA 93727

LOCATION: 5610 E OLIVE AVE
FRESNO, CA 93727

EQUIPMENT DESCRIPTION:
640,000 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK X) WITH PRESSURE/VACUUM VALVE

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 115 lb, 2nd quarter - 115 lb, 3rd quarter - 116 lb, and fourth quarter - 116 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 12/18/08). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Number C-1066-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5960 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DRAFT

DAVID WARNER, Director of Permit Services

C-447-272-0: Oct 17 2011 3:22PM -- TOMS : Joint Inspection NOT Required

6. 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
7. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. The annual average ethanol content of wine stored in this tank shall not exceed 12 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The maximum surface liquid temperature of wine stored in this tank shall not exceed 60 degrees Fahrenheit. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The maximum wine storage throughput in this tank shall not exceed 640,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The maximum wine storage throughput in this tank shall not exceed 4,480,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Daily VOC emissions from wine stored in this tank shall not exceed 130.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2] Federally Enforceable Through Title V Permit
14. Daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-447-273-0

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY

MAILING ADDRESS: 5610 E OLIVE AVE
FRESNO, CA 93727

LOCATION: 5610 E OLIVE AVE
FRESNO, CA 93727

EQUIPMENT DESCRIPTION:

640,000 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK X) WITH PRESSURE/VACUUM VALVE

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 115 lb, 2nd quarter - 115 lb, 3rd quarter - 116 lb, and fourth quarter - 116 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 12/18/08). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Number C-1066-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

C-447-273-0: Oct 17 2011 3:23PM -- TOMS : Joint Inspection NOT Required

6. 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
7. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. The annual average ethanol content of wine stored in this tank shall not exceed 12 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The maximum surface liquid temperature of wine stored in this tank shall not exceed 60 degrees Fahrenheit. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The maximum wine storage throughput in this tank shall not exceed 640,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The maximum wine storage throughput in this tank shall not exceed 4,480,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Daily VOC emissions from wine stored in this tank shall not exceed 130.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2] Federally Enforceable Through Title V Permit
14. Daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-447-274-0

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY

MAILING ADDRESS: 5610 E OLIVE AVE
FRESNO, CA 93727

LOCATION: 5610 E OLIVE AVE
FRESNO, CA 93727

EQUIPMENT DESCRIPTION:

640,000 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK X) WITH PRESSURE/VACUUM VALVE

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
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3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 115 lb, 2nd quarter - 115 lb, 3rd quarter - 116 lb, and fourth quarter - 116 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 12/18/08). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Number C-1066-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

C-447-274-0: Oct 17 2011 3:23PM - TOMS : Joint Inspection NOT Required

6. 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
7. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
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9. The maximum surface liquid temperature of wine stored in this tank shall not exceed 60 degrees Fahrenheit. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The maximum wine storage throughput in this tank shall not exceed 640,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The maximum wine storage throughput in this tank shall not exceed 4,480,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Daily VOC emissions from wine stored in this tank shall not exceed 130.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2] Federally Enforceable Through Title V Permit
14. Daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-447-275-0

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY
MAILING ADDRESS: 5610 E OLIVE AVE
FRESNO, CA 93727

LOCATION: 5610 E OLIVE AVE
FRESNO, CA 93727

EQUIPMENT DESCRIPTION:
640,000 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK X) WITH PRESSURE/VACUUM VALVE

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
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3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 115 lb, 2nd quarter - 115 lb, 3rd quarter - 116 lb, and fourth quarter - 116 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 12/18/08). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Number C-1066-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

C-447-275-0: Oct 17 2011 3:23PM -- TOMS : Joint Inspection NOT Required

6. 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
7. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. The annual average ethanol content of wine stored in this tank shall not exceed 12 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The maximum surface liquid temperature of wine stored in this tank shall not exceed 60 degrees Fahrenheit. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The maximum wine storage throughput in this tank shall not exceed 640,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The maximum wine storage throughput in this tank shall not exceed 4,480,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Daily VOC emissions from wine stored in this tank shall not exceed 130.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2] Federally Enforceable Through Title V Permit
14. Daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-447-276-0

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY

MAILING ADDRESS: 5610 E OLIVE AVE
FRESNO, CA 93727

LOCATION: 5610 E OLIVE AVE
FRESNO, CA 93727

EQUIPMENT DESCRIPTION:

640,000 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK X) WITH PRESSURE/VACUUM VALVE

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 115 lb, 2nd quarter - 115 lb, 3rd quarter - 116 lb, and fourth quarter - 116 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 12/18/08). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Number C-1066-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
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CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5960 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DRAFT

DAVID WARNER, Director of Permit Services

C-447-276-0: Oct 17 2011 3:23PM - TOMS : Joint Inspection NOT Required

6. 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
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10. The maximum wine storage throughput in this tank shall not exceed 640,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The maximum wine storage throughput in this tank shall not exceed 4,480,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Daily VOC emissions from wine stored in this tank shall not exceed 130.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2] Federally Enforceable Through Title V Permit
14. Daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-447-277-0

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY
MAILING ADDRESS: 5610 E OLIVE AVE
FRESNO, CA 93727

LOCATION: 5610 E OLIVE AVE
FRESNO, CA 93727

EQUIPMENT DESCRIPTION:
640,000 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK X) WITH PRESSURE/VACUUM VALVE

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 115 lb, 2nd quarter - 115 lb, 3rd quarter - 116 lb, and fourth quarter - 116 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 12/18/08). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Number C-1066-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DRAFT

DAVID WARNER, Director of Permit Services
C-447-277-0: Oct 17 2011 3:23PM - TOMS : Joint Inspection NOT Required

6. 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
7. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. The annual average ethanol content of wine stored in this tank shall not exceed 12 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The maximum surface liquid temperature of wine stored in this tank shall not exceed 60 degrees Fahrenheit. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The maximum wine storage throughput in this tank shall not exceed 640,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The maximum wine storage throughput in this tank shall not exceed 4,480,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Daily VOC emissions from wine stored in this tank shall not exceed 130.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2] Federally Enforceable Through Title V Permit
14. Daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-447-278-0

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY

MAILING ADDRESS: 5610 E OLIVE AVE
FRESNO, CA 93727

LOCATION: 5610 E OLIVE AVE
FRESNO, CA 93727

EQUIPMENT DESCRIPTION:

640,000 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK X) WITH PRESSURE/VACUUM VALVE

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 115 lb, 2nd quarter - 115 lb, 3rd quarter - 116 lb, and fourth quarter - 116 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 12/18/08). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Number C-1066-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director, APCO

DAVID WARNER, Director of Permit Services

C-447-278-0: Oct 17 2011 3:23PM -- TOMS : Joint Inspection NOT Required

6. 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
7. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. The annual average ethanol content of wine stored in this tank shall not exceed 12 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The maximum surface liquid temperature of wine stored in this tank shall not exceed 60 degrees Fahrenheit. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The maximum wine storage throughput in this tank shall not exceed 640,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The maximum wine storage throughput in this tank shall not exceed 4,480,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Daily VOC emissions from wine stored in this tank shall not exceed 130.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2] Federally Enforceable Through Title V Permit
14. Daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-447-279-0

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY
MAILING ADDRESS: 5610 E OLIVE AVE
FRESNO, CA 93727

LOCATION: 5610 E OLIVE AVE
FRESNO, CA 93727

EQUIPMENT DESCRIPTION:
640,000 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK X) WITH PRESSURE/VACUUM VALVE

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 115 lb, 2nd quarter - 115 lb, 3rd quarter - 116 lb, and fourth quarter - 116 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 12/18/08). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Number C-1066-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

DAVID WARNER, Director of Permit Services

C-447-279-0; Oct 17 2011 3:23PM -- TOMS : Joint Inspection NOT Required

6. 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
7. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. The annual average ethanol content of wine stored in this tank shall not exceed 12 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The maximum surface liquid temperature of wine stored in this tank shall not exceed 60 degrees Fahrenheit. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The maximum wine storage throughput in this tank shall not exceed 640,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The maximum wine storage throughput in this tank shall not exceed 4,480,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Daily VOC emissions from wine stored in this tank shall not exceed 130.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2] Federally Enforceable Through Title V Permit
14. Daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-447-280-0

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY

MAILING ADDRESS: 5610 E OLIVE AVE
FRESNO, CA 93727

LOCATION: 5610 E OLIVE AVE
FRESNO, CA 93727

EQUIPMENT DESCRIPTION:

640,000 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK X) WITH PRESSURE/VACUUM VALVE

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 115 lb, 2nd quarter - 115 lb, 3rd quarter - 116 lb, and fourth quarter - 116 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 12/18/08). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Number C-1066-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director, APCO

DRAFT

DAVID WARNER, Director of Permit Services

C-447-280-0: Oct 17 2011 3:23PM - TOMS : Joint Inspection NOT Required

6. 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
7. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. The annual average ethanol content of wine stored in this tank shall not exceed 12 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The maximum surface liquid temperature of wine stored in this tank shall not exceed 60 degrees Fahrenheit. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The maximum wine storage throughput in this tank shall not exceed 640,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The maximum wine storage throughput in this tank shall not exceed 4,480,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Daily VOC emissions from wine stored in this tank shall not exceed 130.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2] Federally Enforceable Through Title V Permit
14. Daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-447-281-0

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY

MAILING ADDRESS: 5610 E OLIVE AVE
FRESNO, CA 93727

LOCATION: 5610 E OLIVE AVE
FRESNO, CA 93727

EQUIPMENT DESCRIPTION:

640,000 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK X) WITH PRESSURE/VACUUM VALVE

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 115 lb, 2nd quarter - 115 lb, 3rd quarter - 116 lb, and fourth quarter - 116 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 12/18/08). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Number C-1066-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

C-447-281-0; Oct 17 2011 3:23PM - TOMS : Joint Inspection NOT Required

6. 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
7. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. The annual average ethanol content of wine stored in this tank shall not exceed 12 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The maximum surface liquid temperature of wine stored in this tank shall not exceed 60 degrees Fahrenheit. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The maximum wine storage throughput in this tank shall not exceed 640,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The maximum wine storage throughput in this tank shall not exceed 4,480,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Daily VOC emissions from wine stored in this tank shall not exceed 130.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2] Federally Enforceable Through Title V Permit
14. Daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-447-282-0

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY
MAILING ADDRESS: 5610 E OLIVE AVE
FRESNO, CA 93727

LOCATION: 5610 E OLIVE AVE
FRESNO, CA 93727

EQUIPMENT DESCRIPTION:
640,000 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK X) WITH PRESSURE/VACUUM VALVE

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
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4. ERC Certificate Number C-1066-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-6950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DRAFT

DAVID WARNER, Director of Permit Services

C-447-282-0 : Oct 17 2011 3:23PM - TOMS : Joint Inspection NOT Required

6. 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
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10. The maximum wine storage throughput in this tank shall not exceed 640,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The maximum wine storage throughput in this tank shall not exceed 4,480,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Daily VOC emissions from wine stored in this tank shall not exceed 130.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2] Federally Enforceable Through Title V Permit
14. Daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-447-283-0

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY
MAILING ADDRESS: 5610 E OLIVE AVE
FRESNO, CA 93727

LOCATION: 5610 E OLIVE AVE
FRESNO, CA 93727

EQUIPMENT DESCRIPTION:
640,000 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK X) WITH PRESSURE/VACUUM VALVE

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 115 lb, 2nd quarter - 115 lb, 3rd quarter - 116 lb, and fourth quarter - 116 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 12/18/08). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Number C-1066-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

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DAVID WARNER, Director of Permit Services

C-447-283-0: Oct 17 2011 3:23PM - TOMS : Joint Inspection NOT Required

6. 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
7. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. The annual average ethanol content of wine stored in this tank shall not exceed 12 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The maximum surface liquid temperature of wine stored in this tank shall not exceed 60 degrees Fahrenheit. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The maximum wine storage throughput in this tank shall not exceed 640,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The maximum wine storage throughput in this tank shall not exceed 4,480,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Daily VOC emissions from wine stored in this tank shall not exceed 130.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2] Federally Enforceable Through Title V Permit
14. Daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-447-284-0

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY
MAILING ADDRESS: 5610 E OLIVE AVE
FRESNO, CA 93727

LOCATION: 5610 E OLIVE AVE
FRESNO, CA 93727

EQUIPMENT DESCRIPTION:
640,000 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK X) WITH PRESSURE/VACUUM VALVE

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 115 lb, 2nd quarter - 115 lb, 3rd quarter - 116 lb, and fourth quarter - 116 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 12/18/08). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Number C-1066-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

C-447-284-0: Oct 17 2011 3:23PM - TOMS : Joint Inspection NOT Required

6. 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
7. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. The annual average ethanol content of wine stored in this tank shall not exceed 12 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The maximum surface liquid temperature of wine stored in this tank shall not exceed 60 degrees Fahrenheit. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The maximum wine storage throughput in this tank shall not exceed 640,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The maximum wine storage throughput in this tank shall not exceed 4,480,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Daily VOC emissions from wine stored in this tank shall not exceed 130.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2] Federally Enforceable Through Title V Permit
14. Daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-447-285-0

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY
MAILING ADDRESS: 5610 E OLIVE AVE
FRESNO, CA 93727

LOCATION: 5610 E OLIVE AVE
FRESNO, CA 93727

EQUIPMENT DESCRIPTION:
640,000 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK X) WITH PRESSURE/VACUUM VALVE

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 115 lb, 2nd quarter - 115 lb, 3rd quarter - 116 lb, and fourth quarter - 116 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 12/18/08). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Number C-1066-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DRAFT
DAVID WARNER, Director of Permit Services

C-447-285-0: Oct 17 2011 3:23PM - TOMS : Joint Inspection NOT Required

6. 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
7. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. The annual average ethanol content of wine stored in this tank shall not exceed 12 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The maximum surface liquid temperature of wine stored in this tank shall not exceed 60 degrees Fahrenheit. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The maximum wine storage throughput in this tank shall not exceed 640,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The maximum wine storage throughput in this tank shall not exceed 4,480,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Daily VOC emissions from wine stored in this tank shall not exceed 130.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2] Federally Enforceable Through Title V Permit
14. Daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-447-286-0

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY
MAILING ADDRESS: 5610 E OLIVE AVE
FRESNO, CA 93727

LOCATION: 5610 E OLIVE AVE
FRESNO, CA 93727

EQUIPMENT DESCRIPTION:
640,000 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK X) WITH PRESSURE/VACUUM VALVE

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
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3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 115 lb, 2nd quarter - 115 lb, 3rd quarter - 116 lb, and fourth quarter - 116 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 12/18/08). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Number C-1066-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

C-447-286-0 : Oct 17 2011 3:23PM -- TOMS : Joint Inspection NOT Required

6. 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
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8. The annual average ethanol content of wine stored in this tank shall not exceed 12 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The maximum surface liquid temperature of wine stored in this tank shall not exceed 60 degrees Fahrenheit. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The maximum wine storage throughput in this tank shall not exceed 640,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The maximum wine storage throughput in this tank shall not exceed 4,480,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Daily VOC emissions from wine stored in this tank shall not exceed 130.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2] Federally Enforceable Through Title V Permit
14. Daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-447-287-0

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY

MAILING ADDRESS: 5610 E OLIVE AVE
FRESNO, CA 93727

LOCATION: 5610 E OLIVE AVE
FRESNO, CA 93727

EQUIPMENT DESCRIPTION:

640,000 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK X) WITH PRESSURE/VACUUM VALVE

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
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4. ERC Certificate Number C-1066-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director, APCO

DAVID WARNER, Director of Permit Services

C-447-287-0: Oct 17 2011 3:23PM - TOMS : Joint Inspection NOT Required

6. 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
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8. The annual average ethanol content of wine stored in this tank shall not exceed 12 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The maximum surface liquid temperature of wine stored in this tank shall not exceed 60 degrees Fahrenheit. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The maximum wine storage throughput in this tank shall not exceed 640,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The maximum wine storage throughput in this tank shall not exceed 4,480,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Daily VOC emissions from wine stored in this tank shall not exceed 130.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2] Federally Enforceable Through Title V Permit
14. Daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-447-288-0

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY

MAILING ADDRESS: 5610 E OLIVE AVE
FRESNO, CA 93727

LOCATION: 5610 E OLIVE AVE
FRESNO, CA 93727

EQUIPMENT DESCRIPTION:

640,000 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK X) WITH PRESSURE/VACUUM VALVE

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CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO

DRAFT

DAVID WARNER, Director of Permit Services

C-447-288-0: Oct 17 2011 3:23PM - TOMS : Joint Inspection NOT Required

6. 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
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**San Joaquin Valley
Air Pollution Control District**

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-447-289-0

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY
MAILING ADDRESS: 5610 E OLIVE AVE
FRESNO, CA 93727

LOCATION: 5610 E OLIVE AVE
FRESNO, CA 93727

EQUIPMENT DESCRIPTION:
640,000 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK X) WITH PRESSURE/VACUUM VALVE

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 115 lb, 2nd quarter - 115 lb, 3rd quarter - 116 lb, and fourth quarter - 116 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 12/18/08). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Number C-1066-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO

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DAVID WARNER, Director of Permit Services

C-447-289-0; Oct 17 2011 3:23PM -- TOMS : Joint Inspection NOT Required

6. 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
7. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. The annual average ethanol content of wine stored in this tank shall not exceed 12 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The maximum surface liquid temperature of wine stored in this tank shall not exceed 60 degrees Fahrenheit. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The maximum wine storage throughput in this tank shall not exceed 640,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The maximum wine storage throughput in this tank shall not exceed 4,480,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Daily VOC emissions from wine stored in this tank shall not exceed 130.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2] Federally Enforceable Through Title V Permit
14. Daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

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5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

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Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

C-447-290-0: Oct 17 2011 3:23PM - TOMS : Joint Inspection NOT Required

6. 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
7. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. The annual average ethanol content of wine stored in this tank shall not exceed 12 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The maximum surface liquid temperature of wine stored in this tank shall not exceed 60 degrees Fahrenheit. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The maximum wine storage throughput in this tank shall not exceed 640,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The maximum wine storage throughput in this tank shall not exceed 4,480,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Daily VOC emissions from wine stored in this tank shall not exceed 130.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
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San Joaquin Valley
Air Pollution Control District

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DAVID WARNER, Director of Permit Services

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12. Daily VOC emissions from wine stored in this tank shall not exceed 130.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2] Federally Enforceable Through Title V Permit
14. Daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

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