San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

MAR 21 2013

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-1130134

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 the installation of 24 wine storage and fermentation 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)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
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Southern Region
34946 Flyover Court
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Tel: 661-392-5500 FAX: 661-392-5585

www.valleyair.org www.healthyairliving.com

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

MAR 21 2013

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-1130134

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 at 5610 E Olive Ave, 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 the installation of 24 wine storage and fermentation 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-447-271-1 through '294-1 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

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AIR POLLUTION CONTROL DISTRICT

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MAR 21 2013

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-1130134

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 the installation of 24 wine storage and fermentation 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-447-271-1 through '294-1 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

Seyed Sadredin
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 significant modification of E & J Gallo Winery at 5610 E Olive Ave, Fresno, California. The applicant proposes the installation of 24 wine storage and fermentation tanks.

The District's analysis of the legal and factual basis for this proposed action, project #C-1130134, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and at any District office. There are no emission increases associated with this proposed action. This will be the public's only opportunity to comment on the specific conditions of the modification. If requested, the District will hold a public hearing regarding issuance of this modification. For additional information, please contact the District at (559) 230-6000. Written comments on the proposed initial permit must be submitted by April 25, 2013 to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 1990 EAST GETTYSBURG AVENUE, FRESNO, CA 93726.**

San Joaquin Valley Air Pollution Control District

Authority to Construct Application Review

Wine Storage/Fermentation Tanks

Facility Name:	E & J Gallo Winery	Date:	March 20, 2013
Mailing Address:	5610 E Olive Ave	Engineer:	Stanley Tom
	Fresno, CA 93727	Lead Engineer:	Joven Refuerzo
Contact Person:	Dan Martin		
Telephone:	(209) 394-6211		
Application #(s):	C-447-271-1 through '294-1		
Project #:	C-1130134		
Deemed Complete:	February 15, 2013		

I. Proposal

E & J Gallo Winery has requested Authority to Construct (ATC) permits for the installation of 24 wine storage tanks. In project C-1110475, these same 24 wine storage tanks were issued ATCs with a tank volume of 640,000 gallons each. After installation under these ATCs, it was determined the as-built tank volumes differed from the approved ATC tank volumes. This project will re-permit the 24 wine storage tanks with the as-built tank volumes. The tanks will be treated as new for NSR purposes as the previously issued ATCs in project C-1110475 cannot be implemented with the incorrect tank volumes.

In addition to the tank volume revisions, the applicant proposes to revise the emissions calculations performed in project C-1110475 by using ambient temperature pursuant to FYI-295 *Modeling of Emissions for Wine and Distilled Spirits Storage Tanks Using Tanks 4.0d*, and increase the weighted annual average ethanol content from 12% to 15% by volume.

The applicant also proposes to add fermentation capabilities to 20 of the 24 wine storage tanks permitted in project C-1110475.

The following table summarizes the above proposals.

Permit	Tank Volume (gallons)	Storage	Fermentation	Annual Alcohol vol %	Storage Temperature
C-447-271-1	609,251	Yes	Yes	15	Ambient
C-447-272-1	612,539	Yes	No	15	Ambient
C-447-273-1	612,124	Yes	Yes	15	Ambient
C-447-274-1	612,972	Yes	Yes	15	Ambient
C-447-275-1	612,770	Yes	Yes	15	Ambient
C-447-276-1	611,887	Yes	Yes	15	Ambient
C-447-277-1	611,101	Yes	Yes	15	Ambient
C-447-278-1	611,761	Yes	No	15	Ambient

C-447-279-1	615,034	Yes	Yes	15	Ambient
C-447-280-1	613,196	Yes	Yes	15	Ambient
C-447-281-1	612,106	Yes	Yes	15	Ambient
C-447-282-1	612,359	Yes	Yes	15	Ambient
C-447-283-1	611,612	Yes	Yes	15	Ambient
C-447-284-1	612,592	Yes	No	15	Ambient
C-447-285-1	613,109	Yes	Yes	15	Ambient
C-447-286-1	613,536	Yes	Yes	15	Ambient
C-447-287-1	613,913	Yes	Yes	15	Ambient
C-447-288-1	615,603	Yes	Yes	15	Ambient
C-447-289-1	612,570	Yes	Yes	15	Ambient
C-447-290-1	611,948	Yes	No	15	Ambient
C-447-291-1	613,637	Yes	Yes	15	Ambient
C-447-292-1	616,758	Yes	Yes	15	Ambient
C-447-293-1	615,000	Yes	Yes	15	Ambient
C-447-294-1	615,446	Yes	Yes	15	Ambient

The original ATCs issued under project C-1110475 will be canceled and replaced with the ATCs issued in this project. Therefore, the following typical condition will be included on the ATCs to ensure compliance:

- This Authority to Construct (ATC) cancels and supersedes ATC C-447-271-0. [District Rule 2201]

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, 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 (4/21/11)
Rule 2410	Prevention of Significant Deterioration (6/16/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99)
Rule 4002	National Emissions Standards for Hazardous Air Pollutants (5/20/04)
Rule 4102	Nuisance (12/17/92)
Rule 4694	Wine Fermentation and Storage Tanks (12/15/05)
CH&SC 41700	Health Risk Assessment
CH&SC 42301.6	School Notice

Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. Project Location

The facility is located at 5610 E Olive Ave 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

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

After transfer of the must (for red or white wine) to the fermentation tank, the must is inoculated with yeast which initiates the fermentation reactions. During fermentation, the yeast metabolizes the sugar in the grape juice, converting it to ethanol and carbon dioxide (CO_2) while releasing heat. Temperature is typically controlled by refrigeration, and is maintained at 45–65 °F for white wine fermentation and 70–95 °F for red wine fermentation. The sugar content of the fermentation mass is measured in °Brix (weight %) and is typically 22–26° for unfermented grape juice, dropping to 4° or less at the end of fermentation. Finished ethanol concentration is approximately 10 to 14 percent by volume. Batch fermentation requires 3-5 days per batch for red wine and 1-2 weeks per batch for white wine. VOCs are emitted during the fermentation process along with the CO_2. The VOCs consist primarily of ethanol along with small quantities of other fermentation byproducts.

Following the completion of fermentation, white wine is transferred directly to storage tanks. Red wine is first directed to the presses for separation of solids and then routed to the storage tanks. All tanks in the winery typically operate as two separate emissions units: (1) a fermentation operation during which the tank is vented directly to the atmosphere to release the evolved CO_2 byproduct from the fermentation reaction; and (2) a storage operation during which the tank is closed to minimize contact with air and refrigerated to preserve the wine. Post-fermentation operations such as cold stabilization, racking, and filtration are conducted in the tanks, resulting in a number of inter-tank transfers during the period between the end of fermentation and bottling or bulk shipment. Storage operations are conducted year-round. VOC emissions occur primarily as a result of the inter-tank transfers which are necessitated by the post fermentation operations.

V. Equipment Listing

Permit #	Equipment Description
C-447-271-1	609,251 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6635) WITH PRESSURE/VACUUM VALVE
C-447-272-1	612,539 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 6636) WITH PRESSURE/VACUUM VALVE
C-447-273-1	612,124 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6637) WITH PRESSURE/VACUUM VALVE
C-447-274-1	612,972 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6638) WITH PRESSURE/VACUUM VALVE
C-447-275-1	612,707 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6639) WITH PRESSURE/VACUUM VALVE
C-447-276-1	611,887 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6640) WITH PRESSURE/VACUUM VALVE
C-447-277-1	611,101 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6643) WITH PRESSURE/VACUUM VALVE
C-447-278-1	611,761 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 6644) WITH PRESSURE/VACUUM VALVE
C-447-279-1	615,034 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6645) WITH PRESSURE/VACUUM VALVE
C-447-280-1	613,196 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6646) WITH PRESSURE/VACUUM VALVE
C-447-281-1	612,106 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6647) WITH PRESSURE/VACUUM VALVE
C-447-282-1	612,359 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6648) WITH PRESSURE/VACUUM VALVE
C-447-283-1	611,612 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6651) WITH PRESSURE/VACUUM VALVE
C-447-284-1	612,592 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 6652) WITH PRESSURE/VACUUM VALVE
C-447-285-1	613,109 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6653) WITH PRESSURE/VACUUM VALVE

C-447-286-1	613,536 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6654) WITH PRESSURE/VACUUM VALVE
C-447-287-1	613,913 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6655) WITH PRESSURE/VACUUM VALVE
C-447-288-1	615,603 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6656) WITH PRESSURE/VACUUM VALVE
C-447-289-1	612,570 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6659) WITH PRESSURE/VACUUM VALVE
C-447-290-1	611,948 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 6660) WITH PRESSURE/VACUUM VALVE
C-447-291-1	613,637 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6661) WITH PRESSURE/VACUUM VALVE
C-447-292-1	616,758 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6662) WITH PRESSURE/VACUUM VALVE
C-447-293-1	615,000 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6663) WITH PRESSURE/VACUUM VALVE
C-447-294-1	615,446 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6664) 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.

The temperature of the fermentation is controlled to maintain an average fermentation temperature not exceeding 95 °F which avoids higher temperatures that might be damaging to the yeast cells and reduces the potential for an out-of-control fermentation reaction in the tank. Temperature control serves to minimize VOC emissions relative to a tank without temperature control since the potential emissions increase with fermentation temperature.

VII. General Calculations

A. Assumptions

- Winery tanks generally consist of two emissions units; 1) a fermentation tank emissions unit and 2) a wine storage tank emissions unit.
- All tanks will be classified as either red and white wine storage, red and white wine fermentation and storage.

Storage

- Typically, for enclosed tanks with refrigeration and/or insulation (or equivalent) and P/V valves, breathing losses from storage of wine are assumed to be negligible
- Post-project maximum storage tank liquid storage temperature = 81.0 °F per FYI-295
- Post-project annual average storage tank liquid storage temperature = 63.3 °F for all tanks (to be used in emissions calculations) per FYI-295
- Storage tank daily maximum ethanol content of stored wine is 23.9%
- Post-project storage tank annual average ethanol content of stored wine is 15%
- Post-project wine storage daily throughput for permits C-447-271-1 through '278-1, '280-1 through '287-1, '289-1 through '291-1, and '293-1 = 615,000 gallons per day (per tank)
- Post-project wine storage daily throughput for permits C-447-279-1, '288-1, '292-1, and '294-1 = one turnover per day (per tank)
- roject wine storage annual throughput = 4,438,235 gallons per year (per tank)

Fermentation

- Daily VOC fermentation emissions will be determined using a worst case of one tank turnover per day (proposed by the applicant)
- The fermentation tanks are subject to the fermentation tank emission reduction measures of District Rule 4694. The actual production in the tanks is subject to a minimum facility-wide fermentation emission reduction of 35% pursuant to District Rule 4694. The District has determined that the fermentation emission reduction provisions of Rule 4694 constitute a Specific Limiting Condition (SLC) applicable to all wine fermentation tanks at the facility.
- Post-project wine fermentation annual throughput (per tank) = 1,660,000 gallons per year
- Fermentation annual emissions will be based upon the white wine emission factor

B. Emission Factors

Storage

Tanks 4.0 will be used to calculate the emissions from the new storage tanks.

Fermentation

Uncontrolled emissions factors are taken from District FYI-114, *VOC Emission Factors for Wine Fermentation and Storage Tanks.*

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

Fermentation tanks which are subject to the fermentation emission reduction requirements of Rule 4694 are considered to be controlled sources subject to a 35% reduction in emissions. For tanks controlled per Rule 4694, the emission factors are determined to be:

Wine Type	EF (lb-VOC/1,000 gallon of wine)	
	Daily	Annual
White	1.62	2.5 x (1-35%) = 1.6
Red	3.46	6.2 x (1-35%) = 4.0

Since all the fermentation tanks can ferment either white or red wine, worst case emissions factors of red wine will be used to calculate the maximum daily potential emissions. The facility has proposed to calculate annual potential emissions for fermentation based upon the white wine emission factors.

C. Calculations

1. Pre-Project Potential to Emit (PE1)

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

2. Post Project Potential to Emit (PE2)

Storage

Two Tanks 4.0 runs have been performed one using a throughput of 615,000 gallons per 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 4,438,235 gallons/year to calculate the annual post-project potential to emit. See Appendix A for the Tanks 4.0 runs for each tank.

Permit Unit	Daily PE2 (lb-VOC/day)	Annual PE2 (lb-VOC/year)
C-447-271-1	61.5	643
C-447-272-1	61.5	643
C-447-273-1	61.5	643
C-447-274-1	61.5	643
C-447-275-1	61.5	643
C-447-276-1	61.5	643
C-447-277-1	61.5	643
C-447-278-1	61.5	643
C-447-279-1	61.5	643
C-447-280-1	61.5	643
C-447-281-1	61.5	643
C-447-282-1	61.5	643
C-447-283-1	61.5	643
C-447-284-1	61.5	643
C-447-285-1	61.5	643
C-447-286-1	61.5	643
C-447-287-1	61.5	643
C-447-288-1	61.5	643
C-447-289-1	61.5	643
C-447-290-1	61.5	643
C-447-291-1	61.5	643
C-447-292-1	61.5	643
C-447-293-1	61.5	643
C-447-294-1	61.5	643
Total	1,476.0	15,432

Fermentation

Either red or white wine, the fermentation process takes longer than a day (3 to 5 days for red wine and 10 to 14 days for white wine). Therefore, maximum one turnover per day will be used to determine the potential daily emissions.

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

Daily PE2 = EF_{red} (lb-VOC/1,000 gal) x tank capacity (gal/tank) x turnover rate (# tank/day)
Annual PE2 = EF_{white} (lb-VOC/1,000 gal) x annual throughput (gal/year)

Permit Unit	Daily EF	Annual EF	Tank Capacity	Turnover Rate	Annual Throughput	Daily	Annual
	(lb-VOC/1,000 gal)		(gallon)	(tank/day)	(gal/year)	(lb/day)	(lb/year)
C-447-271-1	3.46	1.6	609,251	1	1,660,000	2,108.0	2,656
C-447-273-1			612,124		1,660,000	2,117.9	2,656
C-447-274-1			612,972		1,660,000	2,120.9	2,656
C-447-275-1			611,101		1,660,000	2,114.4	2,656
C-447-276-1			611,761		1,660,000	2,116.7	2,656
C-447-277-1			615,034		1,660,000	2,128.0	2,656
C-447-279-1			611,612		1,660,000	2,116.2	2,656
C-447-280-1			612,592		1,660,000	2,119.6	2,656
C-447-281-1			613,109		1,660,000	2,121.4	2,656
C-447-282-1			613,536		1,660,000	2,122.8	2,656
C-447-283-1			612,570		1,660,000	2,119.5	2,656
C-447-285-1			613,637		1,660,000	2,123.2	2,656
C-447-286-1			616,758		1,660,000	2,134.0	2,656
C-447-287-1			612,770		1,660,000	2,120.2	2,656
C-447-288-1			611,887		1,660,000	2,117.1	2,656
C-447-289-1			612,106		1,660,000	2,117.9	2,656
C-447-291-1			613,913		1,660,000	2,124.1	2,656
C-447-292-1			615,603		1,660,000	2,130.0	2,656
C-447-293-1			615,000		1,660,000	2,127.9	2,656
C-447-294-1			615,446		1,660,000	2,129.4	2,656
Total							53,120

Worst case daily potential to emit for each unit will be taken to be the higher of the storage or fermentation emissions.

Daily Potential to Emit Summary			
Permit Unit	Storage (lb/day)	Fermentation (lb/day)	Total Daily PE (lb/day)
C-447-271-1	61.5	2,108.0	2,108.0
C-447-272-1	61.5	-	61.5
C-447-273-1	61.5	2,117.9	2,117.9
C-447-274-1	61.5	2,120.9	2,120.9
C-447-275-1	61.5	2,114.4	2,114.4
C-447-276-1	61.5	2,116.7	2,116.7
C-447-277-1	61.5	2,128.0	2,128.0
C-447-278-1	61.5	-	61.5
C-447-279-1	61.5	2,116.2	2,116.2
C-447-280-1	61.5	2,119.6	2,119.6
C-447-281-1	61.5	2,121.4	2,121.4
C-447-282-1	61.5	2,122.8	2,122.8
C-447-283-1	61.5	2,119.5	2,119.5
C-447-284-1	61.5	-	61.5

C-447-285-1	61.5	2,123.2	2,123.2
C-447-286-1	61.5	2,134.0	2,134.0
C-447-287-1	61.5	2,120.2	2,120.2
C-447-288-1	61.5	2,117.1	2,117.1
C-447-289-1	61.5	2,117.9	2,117.9
C-447-290-1	61.5	-	61.5
C-447-291-1	61.5	2,124.1	2,124.1
C-447-292-1	61.5	2,130.0	2,130.0
C-447-293-1	61.5	2,127.9	2,127.9
C-447-294-1	61.5	2,129.4	2,129.4

Worst case annual potential to emit for each unit will be taken to be the sum of the storage and fermentation emissions.

Annual Potential to Emit Summary			
Permit Unit	Storage (lb/year)	Fermentation (lb/year)	Total Annual PE (lb/year)
C-447-271-1	643	2,656	3,299
C-447-272-1	643	-	643
C-447-273-1	643	2,656	3,299
C-447-274-1	643	2,656	3,299
C-447-275-1	643	2,656	3,299
C-447-276-1	643	2,656	3,299
C-447-277-1	643	2,656	3,299
C-447-278-1	643	-	643
C-447-279-1	643	2,656	3,299
C-447-280-1	643	2,656	3,299
C-447-281-1	643	2,656	3,299
C-447-282-1	643	2,656	3,299
C-447-283-1	643	2,656	3,299
C-447-284-1	643	-	643
C-447-285-1	643	2,656	3,299
C-447-286-1	643	2,656	3,299
C-447-287-1	643	2,656	3,299
C-447-288-1	643	2,656	3,299
C-447-289-1	643	2,656	3,299
C-447-290-1	643	-	643
C-447-291-1	643	2,656	3,299
C-447-292-1	643	2,656	3,299
C-447-293-1	643	2,656	3,299
C-447-294-1	643	2,656	3,299
Total			68,552

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

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

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

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

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

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

5. Major Source Determination

Rule 2201 Major Source Determination

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

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

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

Rule 2410 Major Source Determination

As determined in Section VII.D.4 of this document, this facility is an existing Rule 2201 major source for VOC emissions. The following table summarizes the potential VOC emissions from previous permitting actions for this stationary source before the proposed project.

Project Number	Proposed Permitting Actions	PE (lb-VOC/year)	PE (ton-VOC/year)
C-1071388	Applying for In-house PTOs for existing wine storage and fermentation tanks	389,736,660	194,868
Total		**389,736,660**	**194,868**

As indicated above, the SSPE VOC emission before the proposal project is calculated to be 389,736,660 pounds per year, equivalent to 194,868 tons per year.

The facility evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21(b)(1)(i). Therefore, the following PSD Major Source threshold for VOC is applicable.

PSD Major Source Determination (tons/year)	
	VOC
Facility PE before Project Increase	194,868
PSD Major Source Thresholds	250
PSD Major Source?	**Yes**

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

6. Baseline Emissions (BE)

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

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

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

otherwise,

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

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

7. SB 288 Major Modification

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

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

SB 288 Major Modification Thresholds (Existing Major Source)			
Pollutant	Project PE (lb/year)	Threshold (lb/year)	SB 288 Major Modification Calculation Required?
VOC	15,432 + 53,120 = 68,552	50,000	Yes

Since the project's PE2 surpasses the SB 288 Major Modification Thresholds for VOC, the Net Emissions Increase (NEI) will be compared to the SB 288 Major Modification thresholds in order to determine if this project constitutes an SB 288 Major Modification.

The NEI is the total of emission increases for every permit unit addressed in this project and is calculated as follows:

NEI = PE2 – BAE

Where: PE2 = the sum of all the PE2s for each permit unit in this project
BAE = for units that are fully offset, the BAE = the PE1 for every unit, otherwise, the BAE is the actual annual emissions averaged over the baseline period for every unit.

Since these are new emission units, BAE = 0.

SB 288 Major Modification Calculation and Determination					
Pollutant	PE2 (lb/year)	BAE (lb/year)	NEI (lb/year)	Thresholds (lb/year)	SB 288 Major Modification?
VOC	15,432 + 53,120 = 68,552	0	68,552	50,000	Yes

As demonstrated in the preceding table, this project does constitute an SB 288 Major Modification for VOC.

8. Federal Major Modification

District Rule 2201 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,

$NEI_N = PE2_N - BAE$

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

$NEI_N = PE2_N$

where $PE2_N$ is the Post Project Potential to Emit for the new emissions units.

$NEI_N = PE2_N = 15,432 + 53,120$ lb-VOC/year = 68,552 lb-VOC/year

The NEI for this project is thus calculated as follows:

$NEI = NEI_N$
NEI = 15,432 + 53,120 lb-VOC/year = 68,552 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.

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

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

- NO2 (as a primary pollutant)
- SO2 (as a primary pollutant)
- CO
- PM
- PM10
- Greenhouse gases (GHG): CO2, N2O, CH4, HFCs, PFCs, and SF6

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

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

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

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

I. Project Location Relative to Class 1 Area

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

II. Significance of Project Emission Increase Determination

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

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

CO2 Emissions from Fermentation

Basis:

- Project total annual fermentation emissions = 53,120 lb-VOC/year
- Assume all wine produced is white wine (worst case).
- The VOC emission factor is 2.5 lb-VOC per 1,000 gallons of white wine fermented.
- Maximum practical ethanol content for wine fermentation is 15 volume percent (higher concentrations have a negative impact on yeast reproduction with death of the yeast occurring at around 18 vol %)
- Molecular weight of ethanol and CO2 are 46 and 44 lb/mole respectively.
- The fermentation reaction produces one mole of carbon dioxide for each mole of ethanol produced.
- Liquid density for ethanol is 6.61 lb/gal at 60 deg F.

Calculation:

$$\text{Maximum Annual Wine Production Based on 100\% White Wine'} = 53{,}120 \ \frac{\text{lb-VOC}}{\text{year}} \div 2.5 \ \frac{\text{lb-VOC}}{1000 \text{ gallons}}$$

$$\text{Maximum Annual Wine Production Based on 100\% White Wine'} = 21{,}248{,}000 \text{ gallons per year}$$

$$\text{Maximum Annual Ethanol Production} = 21{,}248{,}000 \ \frac{\text{gal}}{\text{year}} \times 15\% \text{ ethanol} \times 6.61 \ \frac{\text{lb-ethanol}}{\text{gallon}}$$

$$\text{Maximum Annual Ethanol Production} = 21{,}067{,}392 \text{ lb-ethanol per year}$$

$$\text{Maximum Annual CO2 Production} = 21{,}067{,}392 \frac{\text{lb}}{\text{year}} \times \frac{1 \text{ mole}}{46 \text{ lb ethanol}} \times \frac{1 \text{ mole CO2}}{1 \text{ mole ethanol}} \times \frac{44 \text{ lb CO2}}{\text{mole CO2}}$$

Maximum Annual CO2 Production = 20,151,418 lb-CO2 per year

Maximum Annual CO2 Production = 10,076 ton-CO2 per year

PSD Significant Emission Increase Determination: Potential to Emit (tons/year)						
	NO2	SO2	CO	PM	PM10	CO2e
Total PE from New and Modified Units	0	0	0	0	0	10,076
PSD Significant Emission Increase Thresholds	40	40	100	25	15	75,000
PSD Significant Emission Increase?	N	N	N	N	N	N

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

10. Quarterly Net Emissions Change (QNEC)

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

QNEC = PE2 - PE1, where:

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

C-447-272-1, '278-1, '284-1, '290-1

Quarterly NEC [QNEC]			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO_X	0	0	0
SO_X	0	0	0
PM_{10}	0	0	0
CO	0	0	0
VOC	161	0	161

C-447-271-1, '273-1, '274-1, '275-1, '276-1, '277-1, '279-1, '280-1, '281-1, '282-1, '283-1, '285-1, '286-1, '287-1, '288-1, '289-1, '291-1, '292-1, '293-1, '294-1

Quarterly NEC [QNEC]			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO_X	0	0	0
SO_X	0	0	0
PM_{10}	0	0	0
CO	0	0	0
VOC	825	0	825

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

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

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

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

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

The applicant is proposing to install twenty four new wine fermentation and 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. SB 288/Federal Major Modification

As discussed in Section VII.C.7 and VII.C.8 above, this project does constitute an SB 288 and Federal Major Modification for VOC. Therefore BACT is triggered for VOC.

2. BACT Guideline

BACT Guideline 5.4.14, applies to the wine fermentation tanks. [Wine Fermentation Tanks] (Appendix B)

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

3. Top-Down BACT Analysis

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

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

Fermentation

VOC: Temperature-Controlled Open Top Tank with Maximum Average Fermentation Temperature of 95 deg F.

Storage

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

B. Offsets

1. Offset Applicability

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

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

2. Quantity of Offsets Required

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

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

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

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

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) = Σ[PE2 – BE] x DOR

Offsets Required Summary				
Permit Unit	Storage Annual PE2 (lb-VOC/year)	Fermentation Annual PE2 (lb-VOC/year)	Total Annual PE2 (lb-VOC/year)	Annual BE (lb-VOC/year)
C-447-271-1	643	2,656	3,299	0
C-447-272-1	643	-	643	0
C-447-273-1	643	2,656	3,299	0
C-447-274-1	643	2,656	3,299	0
C-447-275-1	643	2,656	3,299	0
C-447-276-1	643	2,656	3,299	0
C-447-277-1	643	2,656	3,299	0
C-447-278-1	643	-	643	0
C-447-279-1	643	2,656	3,299	0
C-447-280-1	643	2,656	3,299	0
C-447-281-1	643	2,656	3,299	0
C-447-282-1	643	2,656	3,299	0
C-447-283-1	643	2,656	3,299	0
C-447-284-1	643	-	643	0
C-447-285-1	643	2,656	3,299	0
C-447-286-1	643	2,656	3,299	0
C-447-287-1	643	2,656	3,299	0
C-447-288-1	643	2,656	3,299	0
C-447-289-1	643	2,656	3,299	0
C-447-290-1	643	-	643	0
C-447-291-1	643	2,656	3,299	0
C-447-292-1	643	2,656	3,299	0
C-447-293-1	643	2,656	3,299	0
C-447-294-1	643	2,656	3,299	0
Total			68,552	0

C-447-272-1, '278-1, '284-1, '290-1

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

Quarterly Offset Requirement – Each Tank				
Pollutant	1st Qtr (lb/qtr)	2nd Qtr (lb/qtr)	3rd Qtr (lb/qtr)	4th Qtr (lb/qtr)
VOC	160	161	161	161

C-447-271-1, '273-1, '274-1, '275-1, '276-1, '277-1, '279-1, '280-1, '281-1, '282-1, '283-1, '285-1, '286-1, '287-1, '288-1, '289-1, '291-1, '292-1, '293-1, '294-1

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

Quarterly Offset Requirement – Each Tank				
Pollutant	1st Qtr (lb/qtr)	2nd Qtr (lb/qtr)	3rd Qtr (lb/qtr)	4th Qtr (lb/qtr)
VOC	824	825	825	825

The project is a Federal Major Modification and therefore the offset ratio for VOC is 1.5:1.

C-447-272-1, '278-1, '284-1, '290-1

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

Offset Requirement Summary (PE2 – BE) x DOR = 1.5 – Each Tank	
Permit	VOC (lb/year)
Total	643
Total x DOR	965

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

Quarterly Offset Requirement x DOR = 1.5 – Each Tank				
Pollutant	1st Qtr (lb/qtr)	2nd Qtr (lb/qtr)	3rd Qtr (lb/qtr)	4th Qtr (lb/qtr)
VOC	241	241	241	242

C-447-271-1, '273-1, '274-1, '275-1, '276-1, '277-1, '279-1, '280-1, '281-1, '282-1, '283-1, '285-1, '286-1, '287-1, '288-1, '289-1, '291-1, '292-1, '293-1, '294-1

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

Offset Requirement Summary (PE2 – BE) x DOR = 1.5 – Each Tank	
Permit	VOC (lb/year)
Total	3,299
Total x DOR	4,949

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

Quarterly Offset Requirement x DOR = 1.5 – Each Tank				
Pollutant	1st Qtr (lb/qtr)	2nd Qtr (lb/qtr)	3rd Qtr (lb/qtr)	4th Qtr (lb/qtr)
VOC	1,237	1,237	1,237	1,238

C-447-271-1, '272-1, '273-1, '274-1, '275-1, '276-1, '277-1, '278-1, '279-1, '280-1, '281-1, '282-1, '283-1, '284-1, '285-1, '286-1, '287-1, '288-1, '289-1, '290-1, '291-1, '292-1, '293-1, '294-1

For all 24 tanks, the amount of offsets required is as follows:

Offset Requirement (PE2 – BE) – All 24 Tanks	
Permit	VOC (lb/year)
Total	68,552

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

Quarterly Offset Requirement – All 24 Tanks				
Pollutant	1st Qtr (lb/qtr)	2nd Qtr (lb/qtr)	3rd Qtr (lb/qtr)	4th Qtr (lb/qtr)
VOC	17,138	17,138	17,138	17,138

The project is a Federal Major Modification and therefore the offset ratio for VOC is 1.5:1.

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

Offset Requirement Summary (PE2 – BE) x DOR = 1.5 – All 24 Tanks	
Permit	VOC (lb/year)
Total	68,552
Total x DOR	102,828

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

Quarterly Offset Requirement x DOR = 1.5 – All 24 Tanks				
Pollutant	1st Qtr (lb/qtr)	2nd Qtr (lb/qtr)	3rd Qtr (lb/qtr)	4th Qtr (lb/qtr)
VOC	25,707	25,707	25,707	25,707

The applicant has stated that the facility plans to use ERC certificates N-2-1, S-4025-1, S-3805-1, S-3807-1, S-3808-1 to offset the increases in emissions associated with this project. The above certificates have available quarterly credits as follows:

Proposed VOC ERC Certificates				
ERC Certificate #	1st Qtr (lb/qtr)	2nd Qtr (lb/qtr)	3rd Qtr (lb/qtr)	4th Qtr (lb/qtr)
N-2-1	9	9	26	28
S-4025-1	44,473	44,472	44,465	44,397
S-3805-1	18,000	18,000	18,000	18,000
S-3807-1	11,431	11,424	11,417	11,417
S-3808-1	8,098	8,041	8,086	8,086
Total	82,011	81,946	81,994	81,928

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

The facility has surrendered ERC Certificate #C-1171-1, C-1174-1 and C-1180-1 (all split from ERC Certificate #C-1066-1 as listed on the ATCs in project C-1110475) for the ATCs in project C-1110475. As explained in the Proposal section above, the ATCs in project C-1110475 cannot be implemented. The surrendered ERCs for the ATCs in project C-1110475 will be accounted for with the ERC withdrawal project for the ATCs in this project. In order to implement the ATCs to revise the tank volumes and add fermentation capabilities in this project, the facility will be responsible for submitting an ERC withdrawal application for the outstanding offset balance difference between the project to install 24 wine storage tanks (project C-1110475) and the project to revise the tank volumes and add fermentation capabilities (project C-1130134).

Proposed Rule 2201 (offset) Conditions

- ERC Certificate Numbers N-2-1, S-4025-1, S-3805-1, S-3807-1, S-3808-1 (or a certificate split from these certificates) 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-447-272-1, '278-1, '284-1, '290-1

- Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 160 lb, 2nd quarter - 161 lb, 3rd quarter - 161 lb, and fourth quarter - 161 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]

C-447-271-1, '273-1, '274-1, '275-1, '276-1, '277-1, '279-1, '280-1, '281-1, '282-1, '283-1, '285-1, '286-1, '287-1, '288-1, '289-1, '291-1, '292-1, '293-1, '294-1

- Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 824 lb, 2nd quarter - 825 lb, 3rd quarter - 825 lb, and fourth quarter - 825 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [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 and VII.C.8, this project does constitute an SB 288 and Federal Major Modification for VOC; therefore, public noticing for SB 288 and 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?
NO_X	0	100 lb/day	No
SO_X	0	100 lb/day	No
PM_{10}	0	100 lb/day	No
CO	0	100 lb/day	No
VOC	61.5 + 2,134.0 = 2,195.5	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 SSIPE is compared to the SSIPE Public Notice thresholds in the following table:

Stationary Source Increase in Permitted Emissions [SSIPE] – Public Notice					
Pollutant	ΣProject PE2 (lb/year)	ΣProject PE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
VOC	68,552	0	68,552	20,000 lb/year	Yes

As demonstrated above, the SSIPE is greater than 20,000 lb/year for VOC; therefore public noticing for SSIPE purposes is required.

2. Public Notice Action

As discussed above, public noticing is required for this project for PE greater than 100 lb/day for VOC, SB 288 and Federal Major Modification for VOC, and SSIPE greater than 20,000 lb/year for VOC. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB), US Environmental Protection Agency (US EPA), and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATCs for this equipment.

D. Daily Emission Limits (DELs)

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

Proposed Rule 2201 (DEL) Conditions

C-447-271-1, '272-1, '273-1, '274-1, '275-1, '276-1, '277-1, '278-1, '279-1, '280-1, '281-1, '282-1, '283-1, '284-1, '285-1, '286-1, '287-1, '288-1, '289-1, '290-1, '291-1, '292-1, '293-1, '294-1

- The weighted annual average ethanol content of wine stored in this tank, calculated on a twelve month rolling basis, shall not exceed 15 percent by volume. [District Rule 2201]
- The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694]
- The maximum wine storage throughput in this tank shall not exceed 615,000 gallons per day. [District Rule 2201]

C-447-271-1, '273-1, '274-1, '275-1, '276-1, '277-1, '279-1, '280-1, '281-1, '282-1, '283-1, '285-1, '286-1, '287-1, '288-1, '289-1, '291-1, '292-1, '293-1, '294-1

- The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201]
- The daily VOC emissions for fermentation operations in this tank shall not exceed 3.46 lb/day per 1000 gallons of tank capacity. [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 to ensure compliance:

C-447-271-1, '272-1, '273-1, '274-1, '275-1, '276-1, '277-1, '278-1, '279-1, '280-1, '281-1, '282-1, '283-1, '284-1, '285-1, '286-1, '287-1, '288-1, '289-1, '290-1, '291-1, '292-1, '293-1, '294-1

- When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694]
- When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201]
- All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694]
- Records shall be maintained that demonstrate the date of each year's start of crush season. [District Rule 2201]

C-447-271-1, '273-1, '274-1, '275-1, '276-1, '277-1, '279-1, '280-1, '281-1, '282-1, '283-1, '285-1, '286-1, '287-1, '288-1, '289-1, '291-1, '292-1, '293-1, '294-1

- For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and the uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rules 2201 and 4694]
- The permittee shall maintain the following records: red wine and white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury; the volume of each wine movement; and the calculated 12 month rolling wine ethanol content and throughput rate for storage operations and VOC emission rate for fermentation operations (ethanol percentage by volume, gallons and lb-VOC per 12 month rolling period, calculated monthly). [District Rules 2201 and 4694]

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis

An AAQA shall 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

Rule 2201 requires the owner of a new Major Source or a source undergoing a Title I Modification to demonstrate to the satisfaction of the District that all other Major Sources owned by such person and operating in California are in compliance or are on a schedule for compliance with all applicable emission limitations and standards. As discussed in Section VIII above, this facility is a Federal Major Modification and this project does constitute a Title I modification, therefore this requirement is applicable. The facility's compliance certification is included in Appendix D.

H. Alternative Siting Analysis

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

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

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

Rule 2410 Prevention of Significant Deterioration

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

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

Rule 2520 Federally Mandated Operating Permits

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

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

As discussed above, the facility has applied for a Certificate of Conformity (COC) (see Appendix E); 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/or 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/or 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 ensures compliance:

- A Three-Year Compliance Plan that demonstrates compliance with the requirements of Section 5.1 of District Rule 4694 (12/15/05) for each year of the applicable compliance period shall be submitted to the District by no later than December 1, 2006, and every three years thereafter on or before December 1. [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 ≥ 5,000 gallons in capacity and used for storage to ensure compliance with the requirements of Section 5.2.1:

- When this tank is 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]

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 ≥ 5,000 gallons in capacity and used for storage to ensure compliance with the requirements of Section 5.2.2:

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

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 ensure compliance:

- A Three-Year Compliance Plan that demonstrates compliance with the requirements of Section 5.1 of District Rule 4694 (12/15/05) for each year of the applicable compliance period shall be submitted to the District by no later than December 1, 2006, and every three years thereafter on or before December 1. [District Rule 4694]
- A Three-Year Compliance Plan Verification that demonstrates that the Three-Year Compliance Plan elements are in effect shall be submitted to the District by no later than July 1, 2007, and every three years thereafter on or before July 1. [District Rule 4694, 6.2]
- An Annual Compliance Plan Demonstration that shows compliance with the applicable requirements of this rule shall be submitted to the District by no later than February 1, 2008, and every year thereafter on or before February 1. [District Rule 4694]
- 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 6.4.1 requires that records be kept for each fermentation batch. The following condition will be placed on the permits for each fermentation tank to ensure compliance:

- For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and the uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rules 2201 and 4694]

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

- When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694]

Section 6.4.3 requires that all monitoring be performed for any Certified Emission Reductions as identified in the facility's Three-Year Compliance Plan and that the records of all monitoring be maintained. The following condition on the facility-wide permit ensures compliance:

- 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 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]

California Environmental Quality Act (CEQA)

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

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

The City of Fresno (City) is the public agency having principal responsibility for approving the Project. As such, the City serves as the Lead Agency for the project. Consistent with CEQA Guidelines §15070 the City has prepared a Mitigated Negative Declaration which is currently being circulated for public review and comment. The comment period for the Lead Agency's environmental document closes April 15, 2013.

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 Mitigated Negative Declaration prepared by the Lead Agency, and by reaching its own conclusion on whether and how to approve the project (CEQA Guidelines §15096).

The District'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 on conclusion on whether and how to approve the project.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue Authorities to Construct C-447-271-1 through '294-1 subject to the permit conditions on the attached draft Authorities to Construct in Appendix F.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
C-447-271-1	3020-05-F	609,251 gallons	$301.00
C-447-272-1	3020-05-F	612,539 gallons	$301.00
C-447-273-1	3020-05-F	612,124 gallons	$301.00
C-447-274-1	3020-05-F	612,972 gallons	$301.00
C-447-275-1	3020-05-F	611,101 gallons	$301.00
C-447-276-1	3020-05-F	611,761 gallons	$301.00
C-447-277-1	3020-05-F	615,034 gallons	$301.00
C-447-278-1	3020-05-F	613,196 gallons	$301.00
C-447-279-1	3020-05-F	611,612 gallons	$301.00
C-447-280-1	3020-05-F	612,592 gallons	$301.00
C-447-281-1	3020-05-F	613,109 gallons	$301.00
C-447-282-1	3020-05-F	613,536 gallons	$301.00
C-447-283-1	3020-05-F	612,570 gallons	$301.00
C-447-284-1	3020-05-F	611,948 gallons	$301.00
C-447-285-1	3020-05-F	613,637 gallons	$301.00
C-447-286-1	3020-05-F	616,758 gallons	$301.00
C-447-287-1	3020-05-F	612,770 gallons	$301.00
C-447-288-1	3020-05-F	611,887 gallons	$301.00
C-447-289-1	3020-05-F	612,106 gallons	$301.00
C-447-290-1	3020-05-F	612,359 gallons	$301.00
C-447-291-1	3020-05-F	613,913 gallons	$301.00
C-447-292-1	3020-05-F	615,603 gallons	$301.00
C-447-293-1	3020-05-F	615,000 gallons	$301.00
C-447-294-1	3020-05-F	615,446 gallons	$301.00

XI. Appendices

A: Tanks 4.0 Calculations
B: BACT Guideline 5.4.14 and Top Down BACT Analysis
C: BACT Guideline 5.4.13 and Top Down BACT Analysis
D: Compliance Certification
E: Certificate of Conformity
F: Draft ATCs

Appendix A

Tanks 4.0 Calculations

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

Identification

User Identification:	24 Fresno Tanks New Data WI Data Base Daily
City:	Fresno
State:	California
Company:	E & J Gallo Winery
Type of Tank:	Vertical Fixed Roof Tank
Description:	24 Existing Fresno Tanks. About 615,000 gallons rerun with Wine Institute data base. This run removes temperature condition.

Tank Dimensions

Shell Height (ft):	40.00
Diameter (ft):	52.00
Liquid Height (ft) :	40.00
Avg. Liquid Height (ft):	40.00
Volume (gallons):	615,000.00
Turnovers:	365.00
Net Throughput(gal/yr):	224,475,000.00
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

Meterological 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

24 Fresno Tanks New Data WI Data Base Daily - Vertical Fixed Roof Tank
Fresno, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Wine 23.9 % Vol Alcohol	Jan	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Feb	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Mar	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Apr	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	May	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Jun	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Jul	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Aug	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Sep	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Oct	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Nov	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Dec	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869

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

24 Fresno Tanks New Data WI Data Base 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	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):	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044
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:	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977
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):	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044
Vapor Molecular Weight (lb/lb-mole):	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Daily Avg. Liquid Surface Temp. (deg. R):	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700
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):	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700
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):	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Daily Avg. Liquid Surface Temp. (deg R):	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700
Daily Min. Liquid Surface Temp. (deg R):	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700
Daily Max. Liquid Surface Temp. (deg R):	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700
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:	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977
Vapor Pressure at Daily Average Liquid:												
Surface Temperature (psia):	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
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):	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054
Vapor Molecular Weight (lb/lb-mole):	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355
Vapor Pressure at Daily Average Liquid												
Surface Temperature (psia):	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Net Throughput (gal/mo.):	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000
Annual Turnovers:	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000
Turnover Factor:	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489
Maximum Liquid Volume (gal):	615,000.0000	615,000.0000	615,000.0000	615,000.0000	615,000.0000	615,000.0000	615,000.0000	615,000.0000	615,000.0000	615,000.0000	615,000.0000	615,000.0000
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):	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054

$$\frac{2,858.1054}{31} = \frac{92.2}{30.3355} \times \frac{30.3355 - 18.02}{46.02 - 18.02} \times 46.02$$

$$= 61.5 \text{ lb/day}$$

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

24 Fresno Tanks New Data WI Data Base Daily - Vertical Fixed Roof Tank
Fresno, California

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Wine 23.9 % Vol Alcohol	34,297.27	0.00	34,297.27

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

Identification	
User Identification:	C-447-27[illegible]-1 Daily Emissions
City:	Fresno
State:	California
Company:	E & J Gallo Winery
Type of Tank:	Vertical Fixed Roof Tank
Description:	

Tank Dimensions	
Shell Height (ft):	40.00
Diameter (ft):	52.00
Liquid Height (ft) :	40.00
Avg. Liquid Height (ft):	40.00
Volume (gallons):	615,034.00
Turnovers:	365.00
Net Throughput(gal/yr):	224,475,000.00
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):	0.00
Pressure Settings (psig)	0.00

Meterological 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

C-447-277-1 Daily Emissions - Vertical Fixed Roof Tank
Fresno, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Wine 23.9 % Vol Alcohol	Jan	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Feb	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Mar	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Apr	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	May	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Jun	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Jul	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Aug	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Sep	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Oct	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Nov	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Dec	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869

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

C-447-277-1 Daily Emissions - 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):	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044
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:	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977
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):	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044
Vapor Molecular Weight (lb/lb-mole):	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Daily Avg. Liquid Surface Temp. (deg. R):	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700
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):	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700
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):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.8500	0.6500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Daily Avg. Liquid Surface Temp. (deg R):	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700
Daily Min. Liquid Surface Temp. (deg R):	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700
Daily Max. Liquid Surface Temp. (deg R):	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700
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:	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977
Vapor Pressure at Daily Average Liquid:												
Surface Temperature (psia):	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
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):	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054
Vapor Molecular Weight (lb/lb-mole):	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355
Vapor Pressure at Daily Average Liquid												
Surface Temperature (psia):	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Net Throughput (gal/mo.):	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000
Annual Turnovers:	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000
Turnover Factor:	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489
Maximum Liquid Volume (gal):	615,034.0000	615,034.0000	615,034.0000	615,034.0000	615,034.0000	615,034.0000	615,034.0000	615,034.0000	615,034.0000	615,034.0000	615,034.0000	615,034.0000
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):	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054

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

C-447-277-1 Daily Emissions - Vertical Fixed Roof Tank
Fresno, California

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Wine 23.9 % Vol Alcohol	34,297.27	0.00	34,297.27

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

Identification		
User Identification:	C-447-2~~92~~88-1 Daily Emissions	
City:	Fresno	
State:	California	
Company:	E & J Gallo Winery	
Type of Tank:	Vertical Fixed Roof Tank	
Description:		
Tank Dimensions		
Shell Height (ft):		40.00
Diameter (ft):		52.00
Liquid Height (ft) :		40.00
Avg. Liquid Height (ft):		40.00
Volume (gallons):		615,603.00
Turnovers:		365.00
Net Throughput(gal/yr):		224,475,000.00
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):		0.00
Pressure Settings (psig)		0.00

Meterological 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

C-447-292-1 Daily Emissions - Vertical Fixed Roof Tank
Fresno, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Wine 23.9 % Vol Alcohol	Jan	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Feb	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Mar	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Apr	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	May	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Jun	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Jul	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Aug	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Sep	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Oct	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Nov	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Dec	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869

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

C-447-292-1 Daily Emissions - 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):	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044
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:	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977
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):	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044
Vapor Molecular Weight (lb/lb-mole):	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Daily Avg. Liquid Surface Temp. (deg. R):	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700
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):	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700
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):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Daily Avg. Liquid Surface Temp. (deg R):	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700
Daily Min. Liquid Surface Temp. (deg R):	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700
Daily Max. Liquid Surface Temp. (deg R):	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700
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:	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977
Vapor Pressure at Daily Average Liquid:												
Surface Temperature (psia):	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
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):	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054
Vapor Molecular Weight (lb/lb-mole):	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355
Vapor Pressure at Daily Average Liquid												
Surface Temperature (psia):	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Net Throughput (gal/mo.):	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000
Annual Turnovers:	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000
Turnover Factor:	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489
Maximum Liquid Volume (gal):	615,603.0000	615,603.0000	615,603.0000	615,603.0000	615,603.0000	615,603.0000	615,603.0000	615,603.0000	615,603.0000	615,603.0000	615,603.0000	615,603.0000
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):	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054

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

C-447-292-1 Daily Emissions - Vertical Fixed Roof Tank
Fresno, California

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Wine 23.9 % Vol Alcohol	34,297.27	0.00	34,297.27

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

Identification	
User Identification:	C-447-286-1 Daily Emissions
City:	Fresno
State:	California
Company:	E & J Gallo Winery
Type of Tank:	Vertical Fixed Roof Tank
Description:	

Tank Dimensions	
Shell Height (ft):	40.00
Diameter (ft):	52.00
Liquid Height (ft) :	40.00
Avg. Liquid Height (ft):	40.00
Volume (gallons):	616,758.00
Turnovers:	365.00
Net Throughput(gal/yr):	224,475,000.00
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):	0.00
Pressure Settings (psig)	0.00

Meterological 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

C-447-286-1 Daily Emissions - Vertical Fixed Roof Tank
Fresno, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Wine 23.9 % Vol Alcohol	Jan	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Feb	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Mar	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Apr	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	May	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Jun	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Jul	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Aug	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Sep	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Oct	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Nov	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Dec	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869

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

C-447-286-1 Daily Emissions - 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):	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044
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:	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977
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):	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044
Vapor Molecular Weight (lb/lb-mole):	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Daily Avg. Liquid Surface Temp. (deg. R):	540.6700	540.8700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700
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):	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700
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	2,390.9487	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):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Daily Avg. Liquid Surface Temp. (deg R):	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700
Daily Min. Liquid Surface Temp. (deg R):	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700
Daily Max. Liquid Surface Temp. (deg R):	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700
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:	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977
Vapor Pressure at Daily Average Liquid:												
Surface Temperature (psia):	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
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):	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054
Vapor Molecular Weight (lb/lb-mole):	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355
Vapor Pressure at Daily Average Liquid												
Surface Temperature (psia):	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Net Throughput (gal/mo.):	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000
Annual Turnovers:	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000
Turnover Factor:	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489
Maximum Liquid Volume (gal):	616,758.0000	616,758.0000	616,758.0000	616,758.0000	616,758.0000	616,758.0000	616,758.0000	616,758.0000	616,758.0000	616,758.0000	616,758.0000	616,758.0000
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):	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054

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

C-447-286-1 Daily Emissions - Vertical Fixed Roof Tank
Fresno, California

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Wine 23.9 % Vol Alcohol	34,297.27	0.00	34,297.27

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

Identification

User Identification:	C-447-294-1 Daily Emissions
City:	Fresno
State:	California
Company:	E & J Gallo Winery
Type of Tank:	Vertical Fixed Roof Tank
Description:	

Tank Dimensions

Shell Height (ft):	40.00
Diameter (ft):	52.00
Liquid Height (ft) :	40.00
Avg. Liquid Height (ft):	40.00
Volume (gallons):	615,446.00
Turnovers:	365.00
Net Throughput(gal/yr):	224,475,000.00
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):	0.00
Pressure Settings (psig)	0.00

Meterological 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

C-447-294-1 Daily Emissions - Vertical Fixed Roof Tank
Fresno, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Wine 23.9 % Vol Alcohol	Jan	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Feb	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Mar	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Apr	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	May	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Jun	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Jul	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Aug	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Sep	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Oct	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Nov	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869
Wine 23.9 % Vol Alcohol	Dec	81.00	81.00	81.00	81.00	0.8500	0.8500	0.8500	30.3355			20.45	Option 1: VP70 = .58508 VP80 = .81869

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

C-447-294-1 Daily Emissions - 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):	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044
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:	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977
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):	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044
Vapor Molecular Weight (lb/lb-mole):	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Daily Avg. Liquid Surface Temp. (deg. R):	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700
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):	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700
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	651.5527	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):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Daily Avg. Liquid Surface Temp. (deg R):	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700
Daily Min. Liquid Surface Temp. (deg R):	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700
Daily Max. Liquid Surface Temp. (deg R):	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700	540.6700
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:	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977	0.8977
Vapor Pressure at Daily Average Liquid:												
Surface Temperature (psia):	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
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):	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054
Vapor Molecular Weight (lb/lb-mole):	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355	30.3355
Vapor Pressure at Daily Average Liquid												
Surface Temperature (psia):	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Net Throughput (gal/mo.):	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000	18,706,250.0000
Annual Turnovers:	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000	365.0000
Turnover Factor:	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489	0.2489
Maximum Liquid Volume (gal):	615,446.0000	615,446.0000	615,446.0000	615,446.0000	615,446.0000	615,446.0000	615,446.0000	615,446.0000	615,446.0000	615,446.0000	615,446.0000	615,446.0000
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):	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054	2,858.1054

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

C-447-294-1 Daily Emissions - Vertical Fixed Roof Tank
Fresno, California

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Wine 23.9 % Vol Alcohol	34,297.27	0.00	34,297.27

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

Identification

User Identification:	24 Fresno Tanks New Data WI Data Base Annual
City:	Fresno
State:	California
Company:	E & J Gallo Winery
Type of Tank:	Vertical Fixed Roof Tank
Description:	24 Existing Fresno Tanks. About 615,000 gallons rerun with Wine Institute data base. This run removes temperature condition.

Tank Dimensions

Shell Height (ft):	40.00
Diameter (ft):	52.00
Liquid Height (ft) :	40.00
Avg. Liquid Height (ft):	40.00
Volume (gallons):	615,000.00
Turnovers:	7.23
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

Meterological 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

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Fresno, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Wine 15.0 % Vol Alcohol	Jan	63.30	63.30	63.30	63.30	0.4058	0.4058	0.4058	27.1255			19.46	Option 1: VP60 = .35513 VP70 = .50865
Wine 15.0 % Vol Alcohol	Feb	63.30	63.30	63.30	63.30	0.4058	0.4058	0.4058	27.1255			19.46	Option 1: VP60 = .35513 VP70 = .50865
Wine 15.0 % Vol Alcohol	Mar	63.30	63.30	63.30	63.30	0.4058	0.4058	0.4058	27.1255			19.46	Option 1: VP60 = .35513 VP70 = .50865
Wine 15.0 % Vol Alcohol	Apr	63.30	63.30	63.30	63.30	0.4058	0.4058	0.4058	27.1255			19.46	Option 1: VP60 = .35513 VP70 = .50865
Wine 15.0 % Vol Alcohol	May	63.30	63.30	63.30	63.30	0.4058	0.4058	0.4058	27.1255			19.46	Option 1: VP60 = .35513 VP70 = .50865
Wine 15.0 % Vol Alcohol	Jun	63.30	63.30	63.30	63.30	0.4058	0.4058	0.4058	27.1255			19.46	Option 1: VP60 = .35513 VP70 = .50865
Wine 15.0 % Vol Alcohol	Jul	63.30	63.30	63.30	63.30	0.4058	0.4058	0.4058	27.1255			19.46	Option 1: VP60 = .35513 VP70 = .50865
Wine 15.0 % Vol Alcohol	Aug	63.30	63.30	63.30	63.30	0.4058	0.4058	0.4058	27.1255			19.46	Option 1: VP60 = .35513 VP70 = .50865
Wine 15.0 % Vol Alcohol	Sep	63.30	63.30	63.30	63.30	0.4058	0.4058	0.4058	27.1255			19.46	Option 1: VP60 = .35513 VP70 = .50865
Wine 15.0 % Vol Alcohol	Oct	63.30	63.30	63.30	63.30	0.4058	0.4058	0.4058	27.1255			19.46	Option 1: VP60 = .35513 VP70 = .50865
Wine 15.0 % Vol Alcohol	Nov	63.30	63.30	63.30	63.30	0.4058	0.4058	0.4058	27.1255			19.46	Option 1: VP60 = .35513 VP70 = .50865
Wine 15.0 % Vol Alcohol	Dec	63.30	63.30	63.30	63.30	0.4058	0.4058	0.4058	27.1255			19.46	Option 1: VP60 = .35513 VP70 = .50865

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

24 Fresno Tanks New Data WI Data Base 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):	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020
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:	0.9484	0.9484	0.9484	0.9484	0.9484	0.9484	0.9484	0.9484	0.9484	0.9484	0.9484	0.9484
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):	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020
Vapor Molecular Weight (lb/lb-mole):	27.1255	27.1255	27.1255	27.1255	27.1255	27.1255	27.1255	27.1255	27.1255	27.1255	27.1255	27.1255
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058
Daily Avg. Liquid Surface Temp. (deg. R):	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700
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):	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700
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):	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058
Daily Avg. Liquid Surface Temp. (deg R):	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700
Daily Min. Liquid Surface Temp. (deg R):	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700
Daily Max. Liquid Surface Temp. (deg R):	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700	522.9700
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:	0.9484	0.9484	0.9484	0.9484	0.9484	0.9484	0.9484	0.9484	0.9484	0.9484	0.9484	0.9484
Vapor Pressure at Daily Average Liquid:												
Surface Temperature (psia):	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058
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):	97.1488	97.1488	97.1488	97.1488	97.1488	97.1488	97.1488	97.1488	97.1488	97.1488	97.1488	97.1488
Vapor Molecular Weight (lb/lb-mole):	27.1255	27.1255	27.1255	27.1255	27.1255	27.1255	27.1255	27.1255	27.1255	27.1255	27.1255	27.1255
Vapor Pressure at Daily Average Liquid												
Surface Temperature (psia):	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058	0.4058
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:	7.2329	7.2329	7.2329	7.2329	7.2329	7.2329	7.2329	7.2329	7.2329	7.2329	7.2329	7.2329
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):	615,000.0000	615,000.0000	615,000.0000	615,000.0000	615,000.0000	615,000.0000	615,000.0000	615,000.0000	615,000.0000	615,000.0000	615,000.0000	615,000.0000
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):	97.1488	97.1488	97.1488	97.1488	97.1488	97.1488	97.1488	97.1488	97.1488	97.1488	97.1488	97.1488

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

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Fresno, California

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Wine 15.0 % Vol Alcohol	1,165.79	0.00	1,165.79

$$\frac{1165.79}{27.1255} \times \frac{27.1255 - 18.02}{46.02 - 18.02} \times 46.02$$

$$= 643 \text{ lb/year}$$

Appendix B

BACT Guideline 5.4.14 and Top Down BACT Analysis

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 5.4.14*

Last Update 10/6/2009

Wine Fermentation Tank

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

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

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

Top Down BACT Analysis for Wine Fermentation VOC Emissions

Step 1 - Identify All Possible Control Technologies

The SJVUAPCD BACT Clearinghouse guideline 5.4.14, 1st quarter 2013, identifies achieved in practice BACT for wine fermentation tanks as follows:

1) Temperature-Controlled Open Top Tank with Maximum Average Fermentation Temperature of 95 deg F

The SJVUAPCD BACT Clearinghouse guideline 5.4.14, 1st quarter 2013, identifies technologically feasible BACT for wine fermentation tanks as follows:

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

Step 2 - Eliminate Technologically Infeasible Options

None of the above listed technologies are technologically infeasible.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Rank by Control Effectiveness		
Rank	Control	Overall Capture and Control Efficiency(*)
1	Capture of VOCs and thermal or catalytic oxidation or equivalent	88%(**)
2	Capture of VOCs and carbon adsorption or equivalent	86%
3	Capture of VOCs and absorption or equivalent	81%
4	Capture of VOCs and condensation or equivalent	81%
5	Temperature-Controlled Open Top Tank with Maximum Average Fermentation Temperature of 95 deg F	Baseline (Achieved-in-Practice)

(*) Capture efficiency (90%) x removal efficiency for control device.
(**) Following recent District practice, thermal and catalytic oxidation will be ranked together.

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 (achieved-in-practice BACT), as proposed by the facility.

Maximum Vapor Flow Rate

Based on the kinetic model provided by the facility, maximum CO2 production rate for each fermentation tank = 6,469.7 lb/hr (913.9 scfm).

Maximum Vapor Flow Rate = 913.9 scfm x 20 fermentation tanks = 18,278 scfm

The submitted kinetic model was based upon white wine fermentation as a worst case vapor flow rate scenario. Red wine fermentation occurs at a higher temperature and would produce a higher vapor flow rate than white wine fermentation. As well, the annual potential to emit is calculated using the white wine fermentation emission factor. Therefore, all fermentation cost effectiveness calculations will be conservative if based upon white wine fermentation.

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.

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 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

Ductwork	
Cost Description	Cost ($)
Duct Estimate from Eichleay Study 2005 (See Duct Sizing Attachment A)	$1,394,016
Adjusting factor from 2005 dollars to 2013 dollars (2.75% inflation/year)	1.22
Inflation adjusted duct cost	$1,700,700
The following cost data is taken from EPA Control Cost Manual, Sixth Edition (EPA/452/B-02-001).	

Direct Costs (DC)	
Base Equipment Costs (Ductwork) See Above	$1,700,700
Instrumentation 10%	$170,070
Sales Tax 3%	$51,021
Freight 5%	$85,035
Purchased equipment cost	**$2,006,826**
Foundations & supports 8%	$160,546
Handling & erection 14%	$280,956
Electrical 4%	$80,273
Piping 2%	$40,137
Painting 1%	$20,068
Insulation 1%	$20,068
Direct installation costs	**$602,048**
Total Direct Costs	**$2,608,874**
Indirect Costs (IC)	
Engineering 10%	$200,683
Construction and field expenses 5%	$100,341
Contractor fees 10%	$200,683
Start-up 2%	$40,137
Performance test 1%	$20,068
Contingencies 3%	$60,205
Total Indirect Costs	**$622,117**
Total Capital Cost (DC + IC)	**$3,230,991**

Capital Cost Clean-In-Place (CIP) System

A ducting system on a tank farm must have this system to maintain sanitation and quality of the product. The cost of 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. Most likely, these costs will be significant.

Clean-In-Place (CIP) System	
Cost Description	Cost ($)
Current cost of CIP system	$200,000
The following cost data is taken from EPA Control Cost Manual, Sixth Edition (EPA/452/B-02-001).	
Direct Costs (DC)	
Base Equipment Costs (CIP System) See Above	$200,000
Instrumentation 10%	$20,000

Sales Tax 3%	$6,000
Freight 5%	$10,000
Purchased equipment cost	**$236,000**
Foundations & supports 8%	$18,880
Handling & erection 14%	$33,040
Electrical 4%	$9,440
Piping 2%	$4,720
Painting 1%	$2,360
Insulation 1%	$2,360
Direct installation costs	**$70,800**
Total Direct Costs	**$306,800**
Indirect Costs (IC)	
Engineering 10%	$23,600
Construction and field expenses 5%	$11,800
Contractor fees 10%	$23,600
Start-up 2%	$4,720
Performance test 1%	$2,360
Contingencies 3%	$7,080
Total Indirect Costs	**$73,160**
Total Capital Cost (DC + IC)	**$379,960**

Annualized Capital Costs

Two CIP systems are required for a redundant ducting system.

Total capital costs = Ductwork + CIP System (x 2)
= $3,230,991 + $379,960 + $379,960
= $3,990,911

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,

Annualized Capital Investment = $3,990,911 x 0.163 = $649,502

Capture of VOCs and condenstation (> 81% collection & control)

Design Basis

- A common refrigeration system will be installed for all tanks.
- Gallons of wine fermented = 554,000 gallons
- Minimum refrigeration capacity will allow cooling the tanks from 55 °F to 40 °F
- Alcohol production due to fermentation = 1,378 lb (kinetic model)
- Water production due to fermentation = 2,578 lb (kinetic model)
- CO2 production due to fermentation = 439,230 lb (kinetic model)
- Fermentation time = 153 hours (kinetic model)
- Maximum CO2 production rate due to fermentation = 6,470 lb/hr (kinetic model)
- Average CO2 production rate due to fermentation = 4,182 lb/hr (kinetic model)

Enthalpy Data (Btu/lb-mol)		
	40 deg F	55 deg F
Alcohol Vapor	18,660	18,903
Alcohol Liquid	207	579
Water Vapor	19,444	19,562
Water Liquid	145	416
CO2 Vapor	9,882	10,650

Heat Generated by Alcohol = 1,378 lb-alcohol x lb-mol/46 lb x (18,903 – 18,660) Btu/lb-mol
= 7,279 Btu

Heat Generated by Water = 2,578 lb-water x lb-mol/18 lb x (19,562 – 19,444) Btu/lb-mol
= 16,900 Btu

Heat Generated by CO2 = 439,230 lb-CO2 x lb-mol/44 lb x (10,650 – 9,882) Btu/lb-mol
= 7,666,560 Btu

Energy Condense Alcohol = 1,378 lb-alcohol x lb-mol/46 lb x (18,660 – 207) Btu/lb-mol
= 552,788 Btu

Energy Condense Water = 2,578 lb-water x lb-mol/18 lb x (19,444 – 145) Btu/lb-mol
= 2,764,046 Btu

Total Heat Removal = (7,279 + 16,900 + 7,666,560 + 552,788 + 2,764,046) Btu
= 11,007,573 Btu

Heat Removal Rate = 11,007,573 Btu ÷ 153 hours
= 71,945 Btu/hr

Heat Removal Rate Scaled for Peak Rate = 71,945 Btu/hr x (6,470 ÷ 4,182)
= 111,307 Btu/hr

Refrigeration Capacity = 111,307 Btu/hr x (1 ton-hr refrigeration/12,000 Btu)
= 9.28 tons

Capital Cost Refrigeration

Bill Davidson from APCCO refrigeration quoted a client a 60 ton packaged refrigeration unit at about $2,000 per ton of refrigeration in 2011. Therefore, a refrigeration cost of $2,000 per ton of refrigeration will be used in this analysis.

Refrigeration System Cost = $2,000/ton x 9.28 tons x 20 tanks = $371,200

Condensation	
Cost Description	Cost ($)
Cost of Refrigeration system	$371,200
The following cost data is taken from EPA Control Cost Manual, Sixth Edition (EPA/452/B-02-001).	
Direct Costs (DC)	
Base Equipment Costs (Condensation) See Above	$371,200
Instrumentation 10%	$37,120
Sales Tax 3%	$11,136
Freight 5%	$18,560
Purchased equipment cost	**$438,016**
Foundations & supports 8%	$35,041
Handling & erection 14%	$61,322
Electrical 4%	$17,521
Piping 2%	$8,760
Painting 1%	$4,380
Insulation 1%	$4,380
Direct installation costs	**$131,404**
Total Direct Costs	**$569,420**
Indirect Costs (IC)	
Engineering 10%	$43,802
Construction and field expenses 5%	$21,901
Contractor fees 10%	$43,802
Start-up 2%	$8,760
Performance test 1%	$4,380
Contingencies 3%	$13,140

Total Indirect Costs	**$135,785**
Total Capital Cost (DC + IC)	**$705,205**

Annualized Capital Costs

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,

Annualized Capital Investment = $705,205 x 0.163 = $114,769

Total Annualized Cost

Total Annual Cost = Refrigeration System + Ductwork + CIP System
= $114,769 + $649,502
= $764,271

Emission Reductions

For white wine fermentation,

Fermentation Emissions = 1.6 lb-VOC/1000 gal x 1,660,000 gal/year x 20 tanks
= 53,120 lb-VOC/year

Annual Emission Reduction = Fermentation Emissions x 0.81
= 53,120 lb-VOC/year x 0.81
= 43,027 lb-VOC/year
= 21.5 tons-VOC/year

Cost Effectiveness

Cost Effectiveness = Annual Cost ÷ Annual Emission Reductions

Cost Effectiveness = $764,271/year ÷ 21.5 tons-VOC/year
= $35,547/ton-VOC

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

Collection of VOCs and control by absorption (> 81% collection & control)

Capital Cost Scrubber

Scrubber	
Cost Description	Cost ($)
2003 budgetary pricing obtained by Sonoma Technologies for a 750 cfm Scrubber	$108,500
Adjusting factor from 2003 dollars to 2013 dollars (2.75% inflation/year)	1.275
Inflation adjusted Scrubber cost	$138,338
Gas flow rate scfm	18,278
Size adjusted Scrubber cost [138,338 x (18,278 ÷ 750)$^{0.6}$]	$939,857
Scrubber water tank cost (20,000 gallons)	$40,000
Size adjusted Scrubber + water tank cost	$979,857
The following cost data is taken from EPA Control Cost Manual, Sixth Edition (EPA/452/B-02-001).	
Direct Costs (DC)	
Base Equipment Costs (Scrubber System) See Above	$979,857
Instrumentation 10%	$97,986
Sales Tax 3%	$29,396
Freight 5%	$48,993
Purchased equipment cost	**$1,156,232**
Foundations & supports 8%	$92,499
Handling & erection 14%	$161,872
Electrical 4%	$46,249
Piping 2%	$23,125
Painting 1%	$11,562
Insulation 1%	$11,562
Direct installation costs	**$346,869**
Total Direct Costs	**$1,503,101**
Indirect Costs (IC)	
Engineering 10%	$115,623
Construction and field expenses 5%	$57,812
Contractor fees 10%	$115,623
Start-up 2%	$23,125
Performance test 1%	$11,562
Contingencies 3%	$34,687
Total Indirect Costs	**$358,432**
Total Capital Cost (DC + IC)	**$1,861,533**

Annualized Capital Costs

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,

Annualized Capital Investment = $1,861,533 x 0.163 = $302,956

Total Annual Cost

Additionally, the water scrubber will generate ethanol-laden waste water containing 6.94 tons-ethanol annually (15,432 lb/year x 0.90 ÷ 2000). Assuming a 2% solution, approximately 104,900 gallons of waste water (6.94 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.

Annual disposal costs = 104,900 gallons x $0.25/gallon = $26,225

Total Annual Cost = Scrubber System + Disposal Costs + Ductwork + CIP System
= $302,956 + $26,225 + $649,502
= $978,683

Emission Reductions

Annual Emission Reduction = Fermentation Emissions x 0.81
= 53,120 lb-VOC/year x 0.81
= 43,027 lb-VOC/year
= 21.5 tons-VOC/year

Cost Effectiveness

Cost Effectiveness = Annual Cost ÷ Annual Emission Reductions

Cost Effectiveness = $978,683/year ÷ 21.5 tons-VOC/year
= $45,520/ton-VOC

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

Collection of VOCs and control by carbon adsorption (> 86% collection and control)

The Carbon Containment hardware is about equal to the scrubber hardware. A tank is needed for the steam regenerated carbon bed. It is likely two beds will be needed to be able to be on line with one bed while the other is being regenerated.

The carbon bed operated with steam to regenerate the bed produces a water alcohol mixture. The waste stream or disposal costs have not been analyzed in this project.

Carbon Capital Cost

Annual Emission Reduction = Fermentation Emissions x 0.86
= 53,120 lb-VOC/year x 0.86
= 45,683 lb-VOC/year
= 22.8 tons-VOC/year

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

Carbon required = 22.8 tons-VOC/year x 2000 lb/ton x 1/0.20
= 228,416 lb carbon

Carbon capital cost = $1.00/lb = $1.00/lb x 228,416 lb carbon = $228,416

Carbon Adsorption	
Cost Description	Cost ($)
Carbon Adsorption cost (taken from Scrubber cost above)	$138,338
Gas flow rate scfm	18,278
Size adjusted Carbon Adsorption cost [138,338 x $(18,278 \div 750)^{0.6}$]	$939,857
Water alcohol tank cost	$40,000
Size adjusted Carbon Adsorption + water alcohol tank cost	$979,857
Carbon Capital Cost (see above)	$228,416
The following cost data is taken from EPA Control Cost Manual, Sixth Edition (EPA/452/B-02-001).	
Direct Costs (DC)	
Base Equipment Costs (Carbon Adsorption System + Carbon) See Above	$1,208,273
Instrumentation 10%	$120,827
Sales Tax 3%	$36,248
Freight 5%	$60,414
Purchased equipment cost	**$1,425,762**
Foundations & supports 8%	$114,061
Handling & erection 14%	$199,607

Electrical 4%	$57,030
Piping 2%	$28,515
Painting 1%	$14,258
Insulation 1%	$14,258
Direct installation costs	**$427,729**
Total Direct Costs	**$1,853,491**
Indirect Costs (IC)	
Engineering 10%	$142,576
Construction and field expenses 5%	$71,288
Contractor fees 10%	$142,576
Start-up 2%	$28,515
Performance test 1%	$14,258
Contingencies 3%	$42,773
Total Indirect Costs	**$441,986**
Total Capital Cost (DC + IC)	**$2,295,477**

Annualized Capital Costs

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,

Annualized Capital Investment = $2,295,477 x 0.163 = $373,578

Total Annual Cost

Total Annual Cost = Carbon Adsorption System + Ductwork + CIP System
= $373,578 + $649,502
= $1,023,080

Emission Reductions

Annual Emission Reduction = Fermentation Emissions x 0.86
= 53,120 lb-VOC/year x 0.86
= 45,683 lb-VOC/year
= 22.8 tons-VOC/year

Cost Effectiveness

Cost Effectiveness = Annual Cost ÷ Annual Emission Reductions

Cost Effectiveness = $1,023,080/year ÷ 22.8 tons-VOC/year
= $44,872/ton-VOC

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

Collection of VOCs and control by thermal or catalytic oxidation (> 88% collection & control)

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

$C_2H_5OH + 3O_2 \rightarrow 3H_2O + 2CO_2$

The RTO would be connected by ducts to the tanks themselves. If the tanks were to overfill and send liquid down the duct, damage to the RTO could occur. The presence of significant liquid in the knock out drum would cause a shut down of the RTO until the issue could be corrected. The ducting costs include a knock out drum allowance.

Thermal or Catalytic Oxidation	
Cost Description	Cost ($)
5,700 cfm Regenerative Thermal Oxidizer cost (2005 dollars)	$279,000
Adjusting factor from 2005 dollars to 2013 dollars (2.75% inflation/year)	1.22
Inflation adjusted Regenerative Thermal Oxidizer cost	$340,380
Gas flow rate scfm	18,278
Size adjusted Regenerative Thermal Oxidizer cost [340,380 x (18,278 ÷ 5,700)$^{0.6}$]	$684,851
The following cost data is taken from EPA Control Cost Manual, Sixth Edition (EPA/452/B-02-001).	
Direct Costs (DC)	
Base Equipment Costs (Regenerative Thermal Oxidizer System) See Above	$684,851
Instrumentation 10%	$68,485
Sales Tax 3%	$20,546
Freight 5%	$34,243
Purchased equipment cost	**$808,125**

Foundations & supports 8%	$64,650
Handling & erection 14%	$113,138
Electrical 4%	$32,325
Piping 2%	$16,163
Painting 1%	$8,081
Insulation 1%	$8,081
Direct installation costs	**$242,438**
Total Direct Costs	**$1,050,563**
Indirect Costs (IC)	
Engineering 10%	$80,813
Construction and field expenses 5%	$40,406
Contractor fees 10%	$80,813
Start-up 2%	$16,163
Performance test 1%	$8,081
Contingencies 3%	$24,244
Total Indirect Costs	**$250,520**
Total Capital Cost (DC + IC)	**$1,301,083**

Annualized Capital Costs

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,

Annualized Capital Investment = $1,301,083 x 0.163 = $211,745

Total Annual Cost

Fuel and Electricity costs have not been calculated.

Total Annual Cost = Regenerative Thermal Oxidizer System + Ductwork + CIP System
= $211,745 + $649,502
= $861,247

Emission Reductions

Annual Emission Reduction = Fermentation Emissions x 0.88
= 53,120 lb-VOC/year x 0.88
= 46,746 lb-VOC/year
= 23.4 tons-VOC/year

Cost Effectiveness

Cost Effectiveness = Annual Cost ÷ Annual Emission Reductions

Cost Effectiveness = $861,247/year ÷ 23.4 tons-VOC/year
= $36,848/ton-VOC

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

Step 5 – Select BACT

All identified feasible options with control efficiencies higher than the option proposed by the facility have been shown to not be cost effective. The facility has proposed Option 1, temperature-controlled open top tank with maximum average fermentation temperature of 95 deg F. These BACT requirements will be placed on the permits as enforceable conditions.

Appendix C

BACT Guideline 5.4.13 and Top Down BACT Analysis

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 5.4.13*

Last Update 10/6/2009

Wine Storage Tank

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

**Tanks made of heat-conducting materials such as stainless steel may be insulated or stored indoors (in a completely enclosed building, except for vents, doors and other essential openings) to limit exposure ot diumal 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 s a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

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

Top Down BACT Analysis for Wine Storage VOC Emissions

Step 1 - Identify All Possible Control Technologies

The SJVUAPCD BACT Clearinghouse guideline 5.4.13, 1st quarter 2013, 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.
   ***Tanks made of heat-conducting materials such as stainless steel may be insulated or stored indoors (in a completely enclosed building, except for vents, doors and other essential openings) to limit exposure to diurnal temperature variations. Tanks made entirely of non-conducting materials such as concrete and wood (except for fittings) are considered self-insulating.*

The SJVUAPCD BACT Clearinghouse guideline 5.4.13, 1st quarter 2013, identifies technologically feasible BACT for wine storage tanks as follows:

2) Capture of VOCs and thermal or catalytic oxidation or equivalent (98% control)
3) Capture of VOCs and carbon adsorption or equivalent (95% control)
4) Capture of VOCs and absorption or equivalent (90% control)
5) Capture of VOCs and condensation or equivalent (70% control)

Step 2 - Eliminate Technologically Infeasible Options

None of the above listed technologies are technologically infeasible.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Rank by Control Effectiveness		
Rank	Control	Overall Capture and Control Efficiency
1	Capture of VOCs and thermal 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	Baseline (Achieved-in-Practice)

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 the facility.

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.

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 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

Ductwork	
Cost Description	Cost ($)
Duct Estimate from Eichleay Study 2005 (See Duct Sizing Attachment A)	$1,394,016
Adjusting factor from 2005 dollars to 2013 dollars (2.75% inflation/year)	1.22
Inflation adjusted duct cost	$1,700,700
The following cost data is taken from EPA Control Cost Manual, Sixth Edition (EPA/452/B-02-001).	
Direct Costs (DC)	
Base Equipment Costs (Ductwork) See Above	$1,700,700
Instrumentation 10%	$170,070
Sales Tax 3%	$51,021
Freight 5%	$85,035
Purchased equipment cost	**$2,006,826**
Foundations & supports 8%	$160,546
Handling & erection 14%	$280,956
Electrical 4%	$80,273
Piping 2%	$40,137
Painting 1%	$20,068
Insulation 1%	$20,068

Direct installation costs	**$602,048**
Total Direct Costs	**$2,608,874**
Indirect Costs (IC)	
Engineering 10%	$200,683
Construction and field expenses 5%	$100,341
Contractor fees 10%	$200,683
Start-up 2%	$40,137
Performance test 1%	$20,068
Contingencies 3%	$60,205
Total Indirect Costs	**$622,117**
Total Capital Cost (DC + IC)	**$3,230,991**

Capital Cost Clean-In-Place (CIP) System

A ducting system on a tank farm must have this system to maintain sanitation and quality of the product. The cost of 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. Most likely, these costs will be significant.

Clean-In-Place (CIP) System	
Cost Description	Cost ($)
Current cost of CIP system	$200,000
The following cost data is taken from EPA Control Cost Manual, Sixth Edition (EPA/452/B-02-001).	
Direct Costs (DC)	
Base Equipment Costs (CIP System) See Above	$200,000
Instrumentation 10%	$20,000
Sales Tax 3%	$6,000
Freight 5%	$10,000
Purchased equipment cost	**$236,000**
Foundations & supports 8%	$18,880
Handling & erection 14%	$33,040
Electrical 4%	$9,440
Piping 2%	$4,720
Painting 1%	$2,360
Insulation 1%	$2,360
Direct installation costs	**$70,800**
Total Direct Costs	**$306,800**
Indirect Costs (IC)	
Engineering 10%	$23,600
Construction and field expenses 5%	$11,800
Contractor fees 10%	$23,600
Start-up 2%	$4,720

Performance test 1%	$2,360
Contingencies 3%	$7,080
Total Indirect Costs	**$73,160**
Total Capital Cost (DC + IC)	**$379,960**

Annualized Capital Costs

Two CIP systems are required for a redundant ducting system.

Total capital costs = Ductwork + CIP System (x 2)
= $3,230,991 + $379,960 + $379,960
= $3,990,911

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,

Annualized Capital Investment = $3,990,911 x 0.163 = $649,502

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

Total Annual Cost

Total Annual Cost = Ductwork + CIP System
= $649,502

Emission Reductions

Annual Emission Reduction = Uncontrolled Emissions x 0.70
= 15,432 lb-VOC/year x 0.70
= 10,802 lb-VOC/year
= 5.4 tons-VOC/year

Cost Effectiveness

Cost Effectiveness = Annual Cost ÷ Annual Emission Reductions

Cost Effectiveness = $649,502/year ÷ 5.4 tons-VOC/year
= $120,251/ton-VOC

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

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

Total Annual Cost

Total Annual Cost = Ductwork + CIP System
= $649,502

Emission Reductions

Annual Emission Reduction = Uncontrolled Emissions x 0.90
= 15,432 lb-VOC/year x 0.90
= 13,889 lb-VOC/year
= 6.94 tons-VOC/year

Cost Effectiveness

Cost Effectiveness = Annual Cost ÷ Annual Emission Reductions

Cost Effectiveness = $649,502/year ÷ 6.94 tons-VOC/year
= $93,529/ton-VOC

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

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

Total Annual Cost

Total Annual Cost = Ductwork + CIP System
= $649,502
= $649,502

Emission Reductions

Annual Emission Reduction = Uncontrolled Emissions x 0.95
= 15,432 lb-VOC/year x 0.95
= 14,660 lb-VOC/year
= 7.3 tons-VOC/year

Cost Effectiveness

Cost Effectiveness = Annual Cost ÷ Annual Emission Reductions

Cost Effectiveness = $649,502/year ÷ 7.3 tons-VOC/year
= $88,606/ton-VOC

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

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

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

$C_2H_5OH + 3O_2 \rightarrow 3H_2O + 2CO_2$

The RTO would be connected by ducts to the tanks themselves. If the tanks were to overfill and send liquid down the duct, damage to the RTO could occur. The presence of significant liquid in the knock out drum would cause a shut down of the RTO until the issue could be corrected. The ducting costs include a knock out drum allowance.

Total Annual Cost

Total Annual Cost = Ductwork + CIP System
= $649,502

Emission Reductions

Annual Emission Reduction = Uncontrolled Emissions x 0.98
= 15,432 lb-VOC/year x 0.98
= 15,123 lb-VOC/year
= 7.56 tons-VOC/year

Cost Effectiveness

Cost Effectiveness = Annual Cost ÷ Annual Emission Reductions

Cost Effectiveness = $649,502/year ÷ 7.56 tons-VOC/year
= $85,894/ton-VOC

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

Step 5 - Select BACT

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

Attachment A

Duct Sizing and Capital Cost

	Tank Farm Nominal Size			Gas Flow CFM	From Tank to Main Duct Length Feet	Design Duct Velocity from Eichleay Feet/Second	Nominal Duct Size diameter in inches	Standard Size of pipe	Number of Tanks to Connect	Total feet	Cost Per Foot from Eichleay	Cost	Comments Connections From Tank to Main Duct
640K Connection to main duct	615,000	Row	Column	914	60	40	8.36	10.00	24	1440	$144.00	$207,360.00	
	615,000	G	1	1827.80	0	40	11.82	12.00		164.00	$144.00	$23,616.00	
	615,000	D	1	3655.60	0	40	16.71	16.00		62.00	$204.00	$12,648.00	
	615,000	C	1	5483.40	0	40	20.47	20.00		62.00	$309.00	$19,158.00	
	615,000	B	1	7311.20	0	40	23.63	24.00		62.00	$397.00	$24,614.00	
	615,000	G	4	1827.80	0	40	11.82	12.00		164.00	$144.00	$23,616.00	
	615,000	D	4	3655.60	0	40	16.71	18.00		62.00	$251.00	$15,562.00	
	615,000	C	4	5483.40	0	40	20.47	20.00		62.00	$309.00	$19,158.00	
	615,000	B Pick up tanks 6664, 6656, and 6648	4	10052.90	0	40	27.71	28.00		176.00	$476.00	$83,776.00	
Connect to Equipment	615,000	B	1	18278.00	0	40	37.37	40.00		75.00	$476.00	$35,700.00	
											Sum	$465,208	
										Redundant Duct so one can be cleaned while the other carries fermentation gases		$465,208	
										2 Knock drums (7000 gallons)		$92,600	Eichleay
										Ducting Isolation Components		$126,000	See Text Box
										The main process pipe ways have not been completely designed, but some modification is anticipated to support the large ducts.		$120,000	Allowance
										A Bridge Across the Road is needed		$125,000	Allowance
										Ducting Cost		$1,394,016	

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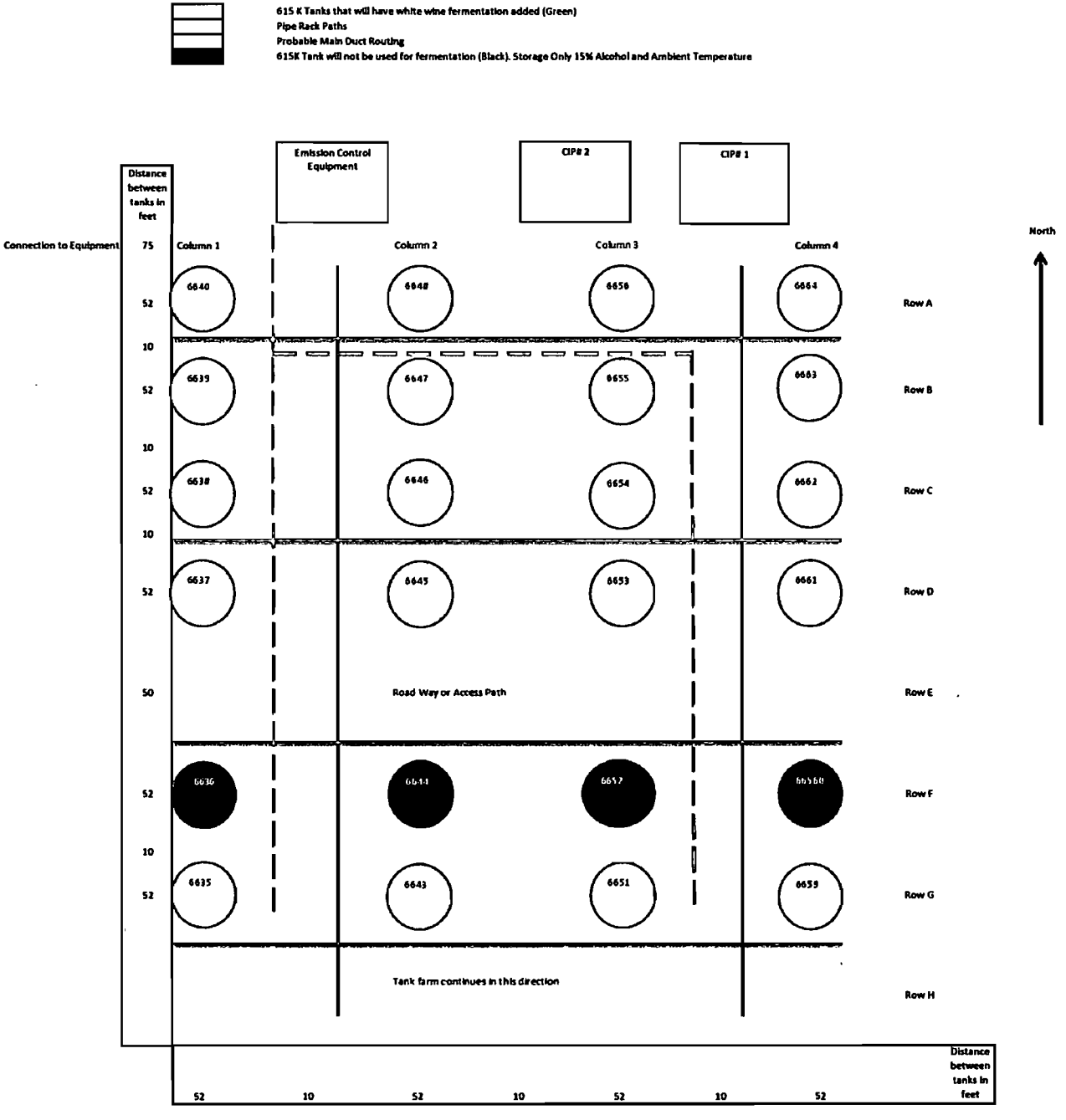
1) One of the major concerns of a manifold duct system is inadvertently transferring fluids from one tank to another. It is possible to mix American, California, or Residual grape alcohol together. These need to be kept separate.

2) For these reasons it is necessary to design into the system a positive disconnect of the ducting system when the tanks is not being filled. There are a number of ways this can be done, but for illustration purposes we took very brief look at a automatic butterfly valve with a physical spool to disconnect the tank from the duct.

3) It should be pointed out that no design work has been done, and this should be considered a conceptual estimate.

6 inch SS Butterfly installed per tank	$2,125
1 foot removable spool	$500


615 K Tanks that will have white wine fermentation added (Green)
Pipe Rack Paths
Probable Main Duct Routing
615K Tank will not be used for fermentation (Black). Storage Only 15% Alcohol and Ambient Temperature
Emission Control Equipment
CIP# 2
CIP# 1
North
Distance between tanks in feet
Connection to Equipment
75
Column 1
Column 2
Column 3
Column 4
6640
6648
6656
6664
Row A
52
10
6639
6647
6655
6663
Row B
52
10
6638
6646
6654
6662
Row C
52
10
6637
6645
6653
6661
Row D
52
Road Way or Access Path
50
Row E
6636
6644
6652
6660
Row F
52
10
6635
6643
6651
6659
Row G
52
Tank farm continues in this direction
Row H
Distance between tanks in feet
52
10
52
10
52
10
52

Duct Size in inches diameter	Duct	Fittings	Bolt up	Handle	Install	Total	Length	$/Foot	Use	Comments
6.00	$950.00	500	455	546	98	$2,549.00	41	$62.17	$61.00	District from Eichleay
8.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$103.25	$103.00	Interpolated
10.00	$1,944.00	800	975	1217	260	$5,196.00	36	$144.33	$144.00	Eichleay
12.00	$4,650.00	1000	2048	2569	520	$10,787.00	75	$143.83	$144.00	Eichleay
14.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$174.17	$174.00	Interpolated
16.00	$3,312.00	1500	2275	2340	390	$9,817.00	48	$204.52	$204.00	Eichleay
18.00	$3,870.00	2000	2535	2517	390	$11,312.00	45	$251.38	$251.00	Eichleay
20.00	$3,680.00	2000	3120	2990	585	$12,375.00	40	$309.38	$309.00	Eichleay
22.00	$4,950.00	2000	3900	3887	585	$15,322.00	50	$306.44	$309.00	Eichleay
24.00	$1,908.00	2000	1560	1495	195	$7,158.00	18	$397.67	$397.00	Eichleay
28.00	$1,785.00	2000	1788	1383	195	$7,151.00	15	$476.73	$476.00	Eichleay
30.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$476.73	$476.00	
32.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$476.73	$476.00	
36.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$548.46	$548.00	
42.00	$100,430.00	25000	48588	48131	5460	$227,609.00	415	$548.46	$548.00	Eichleay

Appendix D

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."

02/20/13

Mr. Steve Kidd
Vice President of Operations

Date

Appendix E

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)

[X] Federal Major Permit MODIFICATION
[ ] MINOR PERMIT MODIFICATION
[ ] ADMINISTRATIVE AMENDMENT

COMPANY NAME: E. & J. Gallo Winery - Fresno	FACILITY ID C-447
1. Type of Organization:[X] Corporation [ ] Sole Ownership [ ] Government [ ] Partnership [ ] 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):

(PC) 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).

(PC) 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.

(PC) Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.

(PC) 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:

Phil Castro

Signature of Responsible Official

02/20/13

Date

Mr. Phil Castro

Name of Responsible Official (please print)

Plant Manager- Fresno Winery

Title of Responsible Official (please print)

Appendix F

Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-447-271-1 **ISSUANCE DATE:** DRAFT

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:
609,251 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6635) 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 Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 824 lb, 2nd quarter - 825 lb, 3rd quarter - 825 lb, and fourth quarter - 825 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 04/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Numbers N-2-1, S-4025-1, S-3805-1, S-3807-1, S-3808-1 (or a certificate split from these certificates) 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. This Authority to Construct (ATC) cancels and supersedes ATC C-447-271-0. [District Rule 2201] Federally Enforceable Through Title V Permit

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

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726 • (559) 230-5900 • Fax (559) 230-6061

6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. When this tank is 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] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, the pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rule 4694] Federally Enforceable Through Title V Permit
10. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The weighted annual average ethanol content of wine stored in this tank, calculated on a twelve month rolling basis, shall not exceed 15 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The maximum wine storage throughput in this tank shall not exceed 615,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 4,438,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The annual VOC emissions from both wine fermentation and wine storage in this tank, calculated on a 12 month rolling basis, shall not exceed 3,299 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
15. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694] Federally Enforceable Through Title V Permit
16. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
17. The daily VOC emissions for fermentation operations in this tank shall not exceed 3.46 lb/day per 1000 gallons of tank capacity. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Annual VOC emissions from wine fermentation in this tank, calculated on a twelve month rolling basis, shall be determined by the following equation: E = 4.0 lb per 1000 gallons x annual red wine production (in gallons) + 1.6 lb per 1000 gallons x annual white wine production (in gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
19. The operator shall maintain records of the calculated 12 month rolling wine ethanol content and storage throughput rate (ethanol percentage by volume and gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
20. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and the uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. The permittee shall maintain the following records: red wine and white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury; the volume of each wine movement; and the calculated 12 month rolling wine ethanol content and throughput rate for storage operations and VOC emission rate for fermentation operations (ethanol percentage by volume, gallons and lb-VOC per 12 month rolling period, calculated monthly). [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

22. If the throughput or ethanol content calculated for any rolling 12-month period exceeds the annual throughput or ethanol content limitations of this permit, in a crush season in which the start of the crush season (defined as the day on which the facility's seasonal crushing/fermentation operations commence) occurs less than 365 days after the start of the previous crush season, then no violation of the throughput or ethanol content limits for that rolling 12-month period will be deemed to have occurred so long as the calendar year throughput and ethanol content are below the annual throughput and ethanol content limitations. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Records shall be maintained that demonstrate the date of each year's start of crush season. [District Rule 2201] Federally Enforceable Through Title V Permit

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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-447-272-1 **ISSUANCE DATE:** DRAFT

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:
612,539 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 6636) 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 Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 160 lb, 2nd quarter - 161 lb, 3rd quarter - 161 lb, and fourth quarter - 161 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 04/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Numbers N-2-1, S-4025-1, S-3805-1, S-3807-1, S-3808-1 (or a certificate split from these certificates) 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. This Authority to Construct (ATC) cancels and supersedes ATC C-447-272-0. [District Rule 2201] Federally Enforceable Through Title V Permit

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-447-272-1 : Mar 21 2013 8:33AM – TOMS : Joint Inspection NOT Required

6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. This tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
8. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rule 4694] Federally Enforceable Through Title V Permit
10. The weighted annual average ethanol content of wine stored in this tank, calculated on a twelve month rolling basis, shall not exceed 15 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The maximum wine storage throughput in this tank shall not exceed 615,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 4,438,235 gallons per year. [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] Federally Enforceable Through Title V Permit
14. Daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. The operator shall maintain records of the calculated 12 month rolling wine ethanol content and storage throughput rate (ethanol percentage by volume and gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
16. If the throughput or ethanol content calculated for any rolling 12-month period exceeds the annual throughput or ethanol content limitations of this permit, in a crush season in which the start of the crush season (defined as the day on which the facility's seasonal crushing/fermentation operations commence) occurs less than 365 days after the start of the previous crush season, then no violation of the throughput or ethanol content limits for that rolling 12-month period will be deemed to have occurred so long as the calendar year throughput and ethanol content are below the annual throughput and ethanol content limitations. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Records shall be maintained that demonstrate the date of each year's start of crush season. [District Rule 2201] Federally Enforceable Through Title V Permit
18. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-447-273-1

ISSUANCE DATE: DRAFT

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:
612,124 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6637) 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 Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 824 lb, 2nd quarter - 825 lb, 3rd quarter - 825 lb, and fourth quarter - 825 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 04/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Numbers N-2-1, S-4025-1, S-3805-1, S-3807-1, S-3808-1 (or a certificate split from these certificates) 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. This Authority to Construct (ATC) cancels and supersedes ATC C-447-271-0. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO

DRAFT

DAVID WARNER, Director of Permit Services
C-447-273-1 : Mar 21 2013 9:33AM – TOMS : Joint Inspection NOT Required

6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. When this tank is 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] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, the pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rule 4694] Federally Enforceable Through Title V Permit
10. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The weighted annual average ethanol content of wine stored in this tank, calculated on a twelve month rolling basis, shall not exceed 15 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The maximum wine storage throughput in this tank shall not exceed 615,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 4,438,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The annual VOC emissions from both wine fermentation and wine storage in this tank, calculated on a 12 month rolling basis, shall not exceed 3,299 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
15. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694] Federally Enforceable Through Title V Permit
16. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
17. The daily VOC emissions for fermentation operations in this tank shall not exceed 3.46 lb/day per 1000 gallons of tank capacity. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Annual VOC emissions from wine fermentation in this tank, calculated on a twelve month rolling basis, shall be determined by the following equation: E = 4.0 lb per 1000 gallons x annual red wine production (in gallons) + 1.6 lb per 1000 gallons x annual white wine production (in gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
19. The operator shall maintain records of the calculated 12 month rolling wine ethanol content and storage throughput rate (ethanol percentage by volume and gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
20. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and the uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. The permittee shall maintain the following records: red wine and white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury; the volume of each wine movement; and the calculated 12 month rolling wine ethanol content and throughput rate for storage operations and VOC emission rate for fermentation operations (ethanol percentage by volume, gallons and lb-VOC per 12 month rolling period, calculated monthly). [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

22. If the throughput or ethanol content calculated for any rolling 12-month period exceeds the annual throughput or ethanol content limitations of this permit, in a crush season in which the start of the crush season (defined as the day on which the facility's seasonal crushing/fermentation operations commence) occurs less than 365 days after the start of the previous crush season, then no violation of the throughput or ethanol content limits for that rolling 12-month period will be deemed to have occurred so long as the calendar year throughput and ethanol content are below the annual throughput and ethanol content limitations. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Records shall be maintained that demonstrate the date of each year's start of crush season. [District Rule 2201] Federally Enforceable Through Title V Permit

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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-447-274-1

ISSUANCE DATE: DRAFT

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:
612,972 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6638) 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 Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 824 lb, 2nd quarter - 825 lb, 3rd quarter - 825 lb, and fourth quarter - 825 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 04/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Numbers N-2-1, S-4025-1, S-3805-1, S-3807-1, S-3808-1 (or a certificate split from these certificates) 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. This Authority to Construct (ATC) cancels and supersedes ATC C-447-271-0. [District Rule 2201] Federally Enforceable Through Title V Permit

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

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726 • (559) 230-5900 • Fax (559) 230-6061

6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

7. When this tank is 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] Federally Enforceable Through Title V Permit

8. When this tank is used for wine storage, the pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

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

10. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit

11. The weighted annual average ethanol content of wine stored in this tank, calculated on a twelve month rolling basis, shall not exceed 15 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit

12. The maximum wine storage throughput in this tank shall not exceed 615,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit

13. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 4,438,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit

14. The annual VOC emissions from both wine fermentation and wine storage in this tank, calculated on a 12 month rolling basis, shall not exceed 3,299 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit

15. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694] Federally Enforceable Through Title V Permit

16. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

17. The daily VOC emissions for fermentation operations in this tank shall not exceed 3.46 lb/day per 1000 gallons of tank capacity. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Annual VOC emissions from wine fermentation in this tank, calculated on a twelve month rolling basis, shall be determined by the following equation: E = 4.0 lb per 1000 gallons x annual red wine production (in gallons) + 1.6 lb per 1000 gallons x annual white wine production (in gallons). [District Rule 2201] Federally Enforceable Through Title V Permit

19. The operator shall maintain records of the calculated 12 month rolling wine ethanol content and storage throughput rate (ethanol percentage by volume and gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit

20. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and the uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. The permittee shall maintain the following records: red wine and white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury; the volume of each wine movement; and the calculated 12 month rolling wine ethanol content and throughput rate for storage operations and VOC emission rate for fermentation operations (ethanol percentage by volume, gallons and lb-VOC per 12 month rolling period, calculated monthly). [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

22. If the throughput or ethanol content calculated for any rolling 12-month period exceeds the annual throughput or ethanol content limitations of this permit, in a crush season in which the start of the crush season (defined as the day on which the facility's seasonal crushing/fermentation operations commence) occurs less than 365 days after the start of the previous crush season, then no violation of the throughput or ethanol content limits for that rolling 12-month period will be deemed to have occurred so long as the calendar year throughput and ethanol content are below the annual throughput and ethanol content limitations. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Records shall be maintained that demonstrate the date of each year's start of crush season. [District Rule 2201] Federally Enforceable Through Title V Permit

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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-447-275-1 **ISSUANCE DATE:** DRAFT

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:
612,770 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6639) 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 Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 824 lb, 2nd quarter - 825 lb, 3rd quarter - 825 lb, and fourth quarter - 825 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 04/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Numbers N-2-1, S-4025-1, S-3805-1, S-3807-1, S-3808-1 (or a certificate split from these certificates) 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. This Authority to Construct (ATC) cancels and supersedes ATC C-447-271-0. [District Rule 2201] Federally Enforceable Through Title V Permit

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-447-275-1 : Mar 21 2013 9:33AM – TOMS : Joint Inspection NOT Required

6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. When this tank is 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] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, the pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rule 4694] Federally Enforceable Through Title V Permit
10. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The weighted annual average ethanol content of wine stored in this tank, calculated on a twelve month rolling basis, shall not exceed 15 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The maximum wine storage throughput in this tank shall not exceed 615,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 4,438,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The annual VOC emissions from both wine fermentation and wine storage in this tank, calculated on a 12 month rolling basis, shall not exceed 3,299 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
15. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694] Federally Enforceable Through Title V Permit
16. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
17. The daily VOC emissions for fermentation operations in this tank shall not exceed 3.46 lb/day per 1000 gallons of tank capacity. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Annual VOC emissions from wine fermentation in this tank, calculated on a twelve month rolling basis, shall be determined by the following equation: E = 4.0 lb per 1000 gallons x annual red wine production (in gallons) + 1.6 lb per 1000 gallons x annual white wine production (in gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
19. The operator shall maintain records of the calculated 12 month rolling wine ethanol content and storage throughput rate (ethanol percentage by volume and gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
20. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and the uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. The permittee shall maintain the following records: red wine and white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury; the volume of each wine movement; and the calculated 12 month rolling wine ethanol content and throughput rate for storage operations and VOC emission rate for fermentation operations (ethanol percentage by volume, gallons and lb-VOC per 12 month rolling period, calculated monthly). [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

22. If the throughput or ethanol content calculated for any rolling 12-month period exceeds the annual throughput or ethanol content limitations of this permit, in a crush season in which the start of the crush season (defined as the day on which the facility's seasonal crushing/fermentation operations commence) occurs less than 365 days after the start of the previous crush season, then no violation of the throughput or ethanol content limits for that rolling 12-month period will be deemed to have occurred so long as the calendar year throughput and ethanol content are below the annual throughput and ethanol content limitations. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Records shall be maintained that demonstrate the date of each year's start of crush season. [District Rule 2201] Federally Enforceable Through Title V Permit

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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-447-276-1 **ISSUANCE DATE:** DRAFT

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:
611,887 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6640) 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 Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 824 lb, 2nd quarter - 825 lb, 3rd quarter - 825 lb, and fourth quarter - 825 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 04/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Numbers N-2-1, S-4025-1, S-3805-1, S-3807-1, S-3808-1 (or a certificate split from these certificates) 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. This Authority to Construct (ATC) cancels and supersedes ATC C-447-271-0. [District Rule 2201] Federally Enforceable Through Title V Permit

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

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6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. When this tank is 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] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, the pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rule 4694] Federally Enforceable Through Title V Permit
10. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The weighted annual average ethanol content of wine stored in this tank, calculated on a twelve month rolling basis, shall not exceed 15 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The maximum wine storage throughput in this tank shall not exceed 615,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 4,438,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The annual VOC emissions from both wine fermentation and wine storage in this tank, calculated on a 12 month rolling basis, shall not exceed 3,299 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
15. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694] Federally Enforceable Through Title V Permit
16. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
17. The daily VOC emissions for fermentation operations in this tank shall not exceed 3.46 lb/day per 1000 gallons of tank capacity. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Annual VOC emissions from wine fermentation in this tank, calculated on a twelve month rolling basis, shall be determined by the following equation: E = 4.0 lb per 1000 gallons x annual red wine production (in gallons) + 1.6 lb per 1000 gallons x annual white wine production (in gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
19. The operator shall maintain records of the calculated 12 month rolling wine ethanol content and storage throughput rate (ethanol percentage by volume and gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
20. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and the uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. The permittee shall maintain the following records: red wine and white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury; the volume of each wine movement; and the calculated 12 month rolling wine ethanol content and throughput rate for storage operations and VOC emission rate for fermentation operations (ethanol percentage by volume, gallons and lb-VOC per 12 month rolling period, calculated monthly). [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

22. If the throughput or ethanol content calculated for any rolling 12-month period exceeds the annual throughput or ethanol content limitations of this permit, in a crush season in which the start of the crush season (defined as the day on which the facility's seasonal crushing/fermentation operations commence) occurs less than 365 days after the start of the previous crush season, then no violation of the throughput or ethanol content limits for that rolling 12-month period will be deemed to have occurred so long as the calendar year throughput and ethanol content are below the annual throughput and ethanol content limitations. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Records shall be maintained that demonstrate the date of each year's start of crush season. [District Rule 2201] Federally Enforceable Through Title V Permit

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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-447-277-1 **ISSUANCE DATE:** DRAFT

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:
611,101 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6643) 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 Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 824 lb, 2nd quarter - 825 lb, 3rd quarter - 825 lb, and fourth quarter - 825 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 04/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Numbers N-2-1, S-4025-1, S-3805-1, S-3807-1, S-3808-1 (or a certificate split from these certificates) 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. This Authority to Construct (ATC) cancels and supersedes ATC C-447-271-0. [District Rule 2201] Federally Enforceable Through Title V Permit

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-447-277-1 : Mar 21 2013 9:33AM – TOMS : Joint Inspection NOT Required

6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. When this tank is 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] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, the pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rule 4694] Federally Enforceable Through Title V Permit
10. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The weighted annual average ethanol content of wine stored in this tank, calculated on a twelve month rolling basis, shall not exceed 15 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The maximum wine storage throughput in this tank shall not exceed 615,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 4,438,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The annual VOC emissions from both wine fermentation and wine storage in this tank, calculated on a 12 month rolling basis, shall not exceed 3,299 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
15. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694] Federally Enforceable Through Title V Permit
16. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
17. The daily VOC emissions for fermentation operations in this tank shall not exceed 3.46 lb/day per 1000 gallons of tank capacity. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Annual VOC emissions from wine fermentation in this tank, calculated on a twelve month rolling basis, shall be determined by the following equation: E = 4.0 lb per 1000 gallons x annual red wine production (in gallons) + 1.6 lb per 1000 gallons x annual white wine production (in gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
19. The operator shall maintain records of the calculated 12 month rolling wine ethanol content and storage throughput rate (ethanol percentage by volume and gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
20. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and the uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. The permittee shall maintain the following records: red wine and white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury; the volume of each wine movement; and the calculated 12 month rolling wine ethanol content and throughput rate for storage operations and VOC emission rate for fermentation operations (ethanol percentage by volume, gallons and lb-VOC per 12 month rolling period, calculated monthly). [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

22. If the throughput or ethanol content calculated for any rolling 12-month period exceeds the annual throughput or ethanol content limitations of this permit, in a crush season in which the start of the crush season (defined as the day on which the facility's seasonal crushing/fermentation operations commence) occurs less than 365 days after the start of the previous crush season, then no violation of the throughput or ethanol content limits for that rolling 12-month period will be deemed to have occurred so long as the calendar year throughput and ethanol content are below the annual throughput and ethanol content limitations. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Records shall be maintained that demonstrate the date of each year's start of crush season. [District Rule 2201] Federally Enforceable Through Title V Permit

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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-447-278-1 **ISSUANCE DATE:** DRAFT

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:
611,761 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 6644) 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 Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 160 lb, 2nd quarter - 161 lb, 3rd quarter - 161 lb, and fourth quarter - 161 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 04/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Numbers N-2-1, S-4025-1, S-3805-1, S-3807-1, S-3808-1 (or a certificate split from these certificates) 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. This Authority to Construct (ATC) cancels and supersedes ATC C-447-278-0. [District Rule 2201] Federally Enforceable Through Title V Permit

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-447-278-1 : Mar 21 2013 8:33AM – TOMS : Joint Inspection NOT Required

6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. This tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
8. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rule 4694] Federally Enforceable Through Title V Permit
10. The weighted annual average ethanol content of wine stored in this tank, calculated on a twelve month rolling basis, shall not exceed 15 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The maximum wine storage throughput in this tank shall not exceed 615,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 4,438,235 gallons per year. [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] Federally Enforceable Through Title V Permit
14. Daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. The operator shall maintain records of the calculated 12 month rolling wine ethanol content and storage throughput rate (ethanol percentage by volume and gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
16. If the throughput or ethanol content calculated for any rolling 12-month period exceeds the annual throughput or ethanol content limitations of this permit, in a crush season in which the start of the crush season (defined as the day on which the facility's seasonal crushing/fermentation operations commence) occurs less than 365 days after the start of the previous crush season, then no violation of the throughput or ethanol content limits for that rolling 12-month period will be deemed to have occurred so long as the calendar year throughput and ethanol content are below the annual throughput and ethanol content limitations. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Records shall be maintained that demonstrate the date of each year's start of crush season. [District Rule 2201] Federally Enforceable Through Title V Permit
18. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-447-279-1

ISSUANCE DATE: DRAFT

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:
615,034 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6645) 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 Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 824 lb, 2nd quarter - 825 lb, 3rd quarter - 825 lb, and fourth quarter - 825 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 04/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Numbers N-2-1, S-4025-1, S-3805-1, S-3807-1, S-3808-1 (or a certificate split from these certificates) 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. This Authority to Construct (ATC) cancels and supersedes ATC C-447-271-0. [District Rule 2201] Federally Enforceable Through Title V Permit

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-447-279-1 : Mar 21 2013 9:33AM – TOMS : Joint Inspection NOT Required

6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. When this tank is 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] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, the pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rule 4694] Federally Enforceable Through Title V Permit
10. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The weighted annual average ethanol content of wine stored in this tank, calculated on a twelve month rolling basis, shall not exceed 15 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The maximum wine storage throughput in this tank shall not exceed 615,034 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 4,438,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The annual VOC emissions from both wine fermentation and wine storage in this tank, calculated on a 12 month rolling basis, shall not exceed 3,299 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
15. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694] Federally Enforceable Through Title V Permit
16. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
17. The daily VOC emissions for fermentation operations in this tank shall not exceed 3.46 lb/day per 1000 gallons of tank capacity. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Annual VOC emissions from wine fermentation in this tank, calculated on a twelve month rolling basis, shall be determined by the following equation: E = 4.0 lb per 1000 gallons x annual red wine production (in gallons) + 1.6 lb per 1000 gallons x annual white wine production (in gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
19. The operator shall maintain records of the calculated 12 month rolling wine ethanol content and storage throughput rate (ethanol percentage by volume and gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
20. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and the uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. The permittee shall maintain the following records: red wine and white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury; the volume of each wine movement; and the calculated 12 month rolling wine ethanol content and throughput rate for storage operations and VOC emission rate for fermentation operations (ethanol percentage by volume, gallons and lb-VOC per 12 month rolling period, calculated monthly). [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

22. If the throughput or ethanol content calculated for any rolling 12-month period exceeds the annual throughput or ethanol content limitations of this permit, in a crush season in which the start of the crush season (defined as the day on which the facility's seasonal crushing/fermentation operations commence) occurs less than 365 days after the start of the previous crush season, then no violation of the throughput or ethanol content limits for that rolling 12-month period will be deemed to have occurred so long as the calendar year throughput and ethanol content are below the annual throughput and ethanol content limitations. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Records shall be maintained that demonstrate the date of each year's start of crush season. [District Rule 2201] Federally Enforceable Through Title V Permit

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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-447-280-1

ISSUANCE DATE: DRAFT

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:
613,196 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6646) 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 Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 824 lb, 2nd quarter - 825 lb, 3rd quarter - 825 lb, and fourth quarter - 825 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 04/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Numbers N-2-1, S-4025-1, S-3805-1, S-3807-1, S-3808-1 (or a certificate split from these certificates) 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. This Authority to Construct (ATC) cancels and supersedes ATC C-447-271-0. [District Rule 2201] Federally Enforceable Through Title V Permit

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-447-280-1 : Mar 21 2013 9:33AM – TOMS : Joint Inspection NOT Required

6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. When this tank is 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] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, the pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rule 4694] Federally Enforceable Through Title V Permit
10. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The weighted annual average ethanol content of wine stored in this tank, calculated on a twelve month rolling basis, shall not exceed 15 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The maximum wine storage throughput in this tank shall not exceed 615,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 4,438,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The annual VOC emissions from both wine fermentation and wine storage in this tank, calculated on a 12 month rolling basis, shall not exceed 3,299 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
15. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694] Federally Enforceable Through Title V Permit
16. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
17. The daily VOC emissions for fermentation operations in this tank shall not exceed 3.46 lb/day per 1000 gallons of tank capacity. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Annual VOC emissions from wine fermentation in this tank, calculated on a twelve month rolling basis, shall be determined by the following equation: E = 4.0 lb per 1000 gallons x annual red wine production (in gallons) + 1.6 lb per 1000 gallons x annual white wine production (in gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
19. The operator shall maintain records of the calculated 12 month rolling wine ethanol content and storage throughput rate (ethanol percentage by volume and gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
20. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and the uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. The permittee shall maintain the following records: red wine and white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury; the volume of each wine movement; and the calculated 12 month rolling wine ethanol content and throughput rate for storage operations and VOC emission rate for fermentation operations (ethanol percentage by volume, gallons and lb-VOC per 12 month rolling period, calculated monthly). [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

22. If the throughput or ethanol content calculated for any rolling 12-month period exceeds the annual throughput or ethanol content limitations of this permit, in a crush season in which the start of the crush season (defined as the day on which the facility's seasonal crushing/fermentation operations commence) occurs less than 365 days after the start of the previous crush season, then no violation of the throughput or ethanol content limits for that rolling 12-month period will be deemed to have occurred so long as the calendar year throughput and ethanol content are below the annual throughput and ethanol content limitations. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Records shall be maintained that demonstrate the date of each year's start of crush season. [District Rule 2201] Federally Enforceable Through Title V Permit

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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-447-281-1

ISSUANCE DATE: DRAFT

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:
612,106 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6647) 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 Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 824 lb, 2nd quarter - 825 lb, 3rd quarter - 825 lb, and fourth quarter - 825 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 04/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Numbers N-2-1, S-4025-1, S-3805-1, S-3807-1, S-3808-1 (or a certificate split from these certificates) 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. This Authority to Construct (ATC) cancels and supersedes ATC C-447-271-0. [District Rule 2201] Federally Enforceable Through Title V Permit

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-447-281-1 : Mar 21 2013 8:33AM – TOMS : Joint Inspection NOT Required

6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. When this tank is 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] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, the pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rule 4694] Federally Enforceable Through Title V Permit
10. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The weighted annual average ethanol content of wine stored in this tank, calculated on a twelve month rolling basis, shall not exceed 15 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The maximum wine storage throughput in this tank shall not exceed 615,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 4,438,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The annual VOC emissions from both wine fermentation and wine storage in this tank, calculated on a 12 month rolling basis, shall not exceed 3,299 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
15. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694] Federally Enforceable Through Title V Permit
16. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
17. The daily VOC emissions for fermentation operations in this tank shall not exceed 3.46 lb/day per 1000 gallons of tank capacity. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Annual VOC emissions from wine fermentation in this tank, calculated on a twelve month rolling basis, shall be determined by the following equation: E = 4.0 lb per 1000 gallons x annual red wine production (in gallons) + 1.6 lb per 1000 gallons x annual white wine production (in gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
19. The operator shall maintain records of the calculated 12 month rolling wine ethanol content and storage throughput rate (ethanol percentage by volume and gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
20. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and the uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. The permittee shall maintain the following records: red wine and white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury; the volume of each wine movement; and the calculated 12 month rolling wine ethanol content and throughput rate for storage operations and VOC emission rate for fermentation operations (ethanol percentage by volume, gallons and lb-VOC per 12 month rolling period, calculated monthly). [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

22. If the throughput or ethanol content calculated for any rolling 12-month period exceeds the annual throughput or ethanol content limitations of this permit, in a crush season in which the start of the crush season (defined as the day on which the facility's seasonal crushing/fermentation operations commence) occurs less than 365 days after the start of the previous crush season, then no violation of the throughput or ethanol content limits for that rolling 12-month period will be deemed to have occurred so long as the calendar year throughput and ethanol content are below the annual throughput and ethanol content limitations. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Records shall be maintained that demonstrate the date of each year's start of crush season. [District Rule 2201] Federally Enforceable Through Title V Permit

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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-447-282-1 **ISSUANCE DATE:** DRAFT

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:
612,359 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6648) 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 Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 824 lb, 2nd quarter - 825 lb, 3rd quarter - 825 lb, and fourth quarter - 825 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 04/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Numbers N-2-1, S-4025-1, S-3805-1, S-3807-1, S-3808-1 (or a certificate split from these certificates) 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. This Authority to Construct (ATC) cancels and supersedes ATC C-447-271-0. [District Rule 2201] Federally Enforceable Through Title V Permit

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-447-282-1 : Mar 21 2013 9:33AM -- TOMS : Joint Inspection NOT Required

6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. When this tank is 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] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, the pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rule 4694] Federally Enforceable Through Title V Permit
10. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The weighted annual average ethanol content of wine stored in this tank, calculated on a twelve month rolling basis, shall not exceed 15 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The maximum wine storage throughput in this tank shall not exceed 615,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 4,438,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The annual VOC emissions from both wine fermentation and wine storage in this tank, calculated on a 12 month rolling basis, shall not exceed 3,299 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
15. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694] Federally Enforceable Through Title V Permit
16. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
17. The daily VOC emissions for fermentation operations in this tank shall not exceed 3.46 lb/day per 1000 gallons of tank capacity. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Annual VOC emissions from wine fermentation in this tank, calculated on a twelve month rolling basis, shall be determined by the following equation: E = 4.0 lb per 1000 gallons x annual red wine production (in gallons) + 1.6 lb per 1000 gallons x annual white wine production (in gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
19. The operator shall maintain records of the calculated 12 month rolling wine ethanol content and storage throughput rate (ethanol percentage by volume and gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
20. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and the uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. The permittee shall maintain the following records: red wine and white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury; the volume of each wine movement; and the calculated 12 month rolling wine ethanol content and throughput rate for storage operations and VOC emission rate for fermentation operations (ethanol percentage by volume, gallons and lb-VOC per 12 month rolling period, calculated monthly). [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

22. If the throughput or ethanol content calculated for any rolling 12-month period exceeds the annual throughput or ethanol content limitations of this permit, in a crush season in which the start of the crush season (defined as the day on which the facility's seasonal crushing/fermentation operations commence) occurs less than 365 days after the start of the previous crush season, then no violation of the throughput or ethanol content limits for that rolling 12-month period will be deemed to have occurred so long as the calendar year throughput and ethanol content are below the annual throughput and ethanol content limitations. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Records shall be maintained that demonstrate the date of each year's start of crush season. [District Rule 2201] Federally Enforceable Through Title V Permit

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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-447-283-1

ISSUANCE DATE: DRAFT

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:
611,612 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6651) 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 Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 824 lb, 2nd quarter - 825 lb, 3rd quarter - 825 lb, and fourth quarter - 825 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 04/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Numbers N-2-1, S-4025-1, S-3805-1, S-3807-1, S-3808-1 (or a certificate split from these certificates) 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. This Authority to Construct (ATC) cancels and supersedes ATC C-447-271-0. [District Rule 2201] Federally Enforceable Through Title V Permit

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-447-283-1 : Mar 21 2013 9:33AM – TOMS : Joint Inspection NOT Required

6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. When this tank is 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] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, the pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rule 4694] Federally Enforceable Through Title V Permit
10. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The weighted annual average ethanol content of wine stored in this tank, calculated on a twelve month rolling basis, shall not exceed 15 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The maximum wine storage throughput in this tank shall not exceed 615,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 4,438,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The annual VOC emissions from both wine fermentation and wine storage in this tank, calculated on a 12 month rolling basis, shall not exceed 3,299 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
15. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694] Federally Enforceable Through Title V Permit
16. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
17. The daily VOC emissions for fermentation operations in this tank shall not exceed 3.46 lb/day per 1000 gallons of tank capacity. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Annual VOC emissions from wine fermentation in this tank, calculated on a twelve month rolling basis, shall be determined by the following equation: E = 4.0 lb per 1000 gallons x annual red wine production (in gallons) + 1.6 lb per 1000 gallons x annual white wine production (in gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
19. The operator shall maintain records of the calculated 12 month rolling wine ethanol content and storage throughput rate (ethanol percentage by volume and gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
20. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and the uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. The permittee shall maintain the following records: red wine and white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury; the volume of each wine movement; and the calculated 12 month rolling wine ethanol content and throughput rate for storage operations and VOC emission rate for fermentation operations (ethanol percentage by volume, gallons and lb-VOC per 12 month rolling period, calculated monthly). [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

22. If the throughput or ethanol content calculated for any rolling 12-month period exceeds the annual throughput or ethanol content limitations of this permit, in a crush season in which the start of the crush season (defined as the day on which the facility's seasonal crushing/fermentation operations commence) occurs less than 365 days after the start of the previous crush season, then no violation of the throughput or ethanol content limits for that rolling 12-month period will be deemed to have occurred so long as the calendar year throughput and ethanol content are below the annual throughput and ethanol content limitations. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Records shall be maintained that demonstrate the date of each year's start of crush season. [District Rule 2201] Federally Enforceable Through Title V Permit

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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-447-284-1

ISSUANCE DATE: DRAFT

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:
612,592 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 6652) 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 Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 160 lb, 2nd quarter - 161 lb, 3rd quarter - 161 lb, and fourth quarter - 161 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 04/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Numbers N-2-1, S-4025-1, S-3805-1, S-3807-1, S-3808-1 (or a certificate split from these certificates) 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. This Authority to Construct (ATC) cancels and supersedes ATC C-447-284-0. [District Rule 2201] Federally Enforceable Through Title V Permit

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-447-284-1 : Mar 21 2013 9:33AM – TOMS : Joint Inspection NOT Required

6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. This tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
8. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rule 4694] Federally Enforceable Through Title V Permit
10. The weighted annual average ethanol content of wine stored in this tank, calculated on a twelve month rolling basis, shall not exceed 15 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The maximum wine storage throughput in this tank shall not exceed 615,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 4,438,235 gallons per year. [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] Federally Enforceable Through Title V Permit
14. Daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. The operator shall maintain records of the calculated 12 month rolling wine ethanol content and storage throughput rate (ethanol percentage by volume and gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
16. If the throughput or ethanol content calculated for any rolling 12-month period exceeds the annual throughput or ethanol content limitations of this permit, in a crush season in which the start of the crush season (defined as the day on which the facility's seasonal crushing/fermentation operations commence) occurs less than 365 days after the start of the previous crush season, then no violation of the throughput or ethanol content limits for that rolling 12-month period will be deemed to have occurred so long as the calendar year throughput and ethanol content are below the annual throughput and ethanol content limitations. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Records shall be maintained that demonstrate the date of each year's start of crush season. [District Rule 2201] Federally Enforceable Through Title V Permit
18. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-447-285-1

ISSUANCE DATE: DRAFT

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:
613,109 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6653) 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 Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 824 lb, 2nd quarter - 825 lb, 3rd quarter - 825 lb, and fourth quarter - 825 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 04/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Numbers N-2-1, S-4025-1, S-3805-1, S-3807-1, S-3808-1 (or a certificate split from these certificates) 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. This Authority to Construct (ATC) cancels and supersedes ATC C-447-271-0. [District Rule 2201] Federally Enforceable Through Title V Permit

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-447-285-1 : Mar 21 2013 8:33AM – TOMS : Joint Inspection NOT Required

6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. When this tank is 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] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, the pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rule 4694] Federally Enforceable Through Title V Permit
10. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The weighted annual average ethanol content of wine stored in this tank, calculated on a twelve month rolling basis, shall not exceed 15 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The maximum wine storage throughput in this tank shall not exceed 615,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 4,438,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The annual VOC emissions from both wine fermentation and wine storage in this tank, calculated on a 12 month rolling basis, shall not exceed 3,299 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
15. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694] Federally Enforceable Through Title V Permit
16. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
17. The daily VOC emissions for fermentation operations in this tank shall not exceed 3.46 lb/day per 1000 gallons of tank capacity. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Annual VOC emissions from wine fermentation in this tank, calculated on a twelve month rolling basis, shall be determined by the following equation: E = 4.0 lb per 1000 gallons x annual red wine production (in gallons) + 1.6 lb per 1000 gallons x annual white wine production (in gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
19. The operator shall maintain records of the calculated 12 month rolling wine ethanol content and storage throughput rate (ethanol percentage by volume and gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
20. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and the uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. The permittee shall maintain the following records: red wine and white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury; the volume of each wine movement; and the calculated 12 month rolling wine ethanol content and throughput rate for storage operations and VOC emission rate for fermentation operations (ethanol percentage by volume, gallons and lb-VOC per 12 month rolling period, calculated monthly). [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

22. If the throughput or ethanol content calculated for any rolling 12-month period exceeds the annual throughput or ethanol content limitations of this permit, in a crush season in which the start of the crush season (defined as the day on which the facility's seasonal crushing/fermentation operations commence) occurs less than 365 days after the start of the previous crush season, then no violation of the throughput or ethanol content limits for that rolling 12-month period will be deemed to have occurred so long as the calendar year throughput and ethanol content are below the annual throughput and ethanol content limitations. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Records shall be maintained that demonstrate the date of each year's start of crush season. [District Rule 2201] Federally Enforceable Through Title V Permit

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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-447-286-1

ISSUANCE DATE: DRAFT

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:
613,536 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6654) 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 Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 824 lb, 2nd quarter - 825 lb, 3rd quarter - 825 lb, and fourth quarter - 825 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 04/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Numbers N-2-1, S-4025-1, S-3805-1, S-3807-1, S-3808-1 (or a certificate split from these certificates) 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. This Authority to Construct (ATC) cancels and supersedes ATC C-447-271-0. [District Rule 2201] Federally Enforceable Through Title V Permit

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

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726 • (559) 230-5900 • Fax (559) 230-6061

6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. When this tank is 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] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, the pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rule 4694] Federally Enforceable Through Title V Permit
10. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The weighted annual average ethanol content of wine stored in this tank, calculated on a twelve month rolling basis, shall not exceed 15 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The maximum wine storage throughput in this tank shall not exceed 615,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 4,438,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The annual VOC emissions from both wine fermentation and wine storage in this tank, calculated on a 12 month rolling basis, shall not exceed 3,299 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
15. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694] Federally Enforceable Through Title V Permit
16. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
17. The daily VOC emissions for fermentation operations in this tank shall not exceed 3.46 lb/day per 1000 gallons of tank capacity. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Annual VOC emissions from wine fermentation in this tank, calculated on a twelve month rolling basis, shall be determined by the following equation: E = 4.0 lb per 1000 gallons x annual red wine production (in gallons) + 1.6 lb per 1000 gallons x annual white wine production (in gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
19. The operator shall maintain records of the calculated 12 month rolling wine ethanol content and storage throughput rate (ethanol percentage by volume and gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
20. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and the uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. The permittee shall maintain the following records: red wine and white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury; the volume of each wine movement; and the calculated 12 month rolling wine ethanol content and throughput rate for storage operations and VOC emission rate for fermentation operations (ethanol percentage by volume, gallons and lb-VOC per 12 month rolling period, calculated monthly). [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

22. If the throughput or ethanol content calculated for any rolling 12-month period exceeds the annual throughput or ethanol content limitations of this permit, in a crush season in which the start of the crush season (defined as the day on which the facility's seasonal crushing/fermentation operations commence) occurs less than 365 days after the start of the previous crush season, then no violation of the throughput or ethanol content limits for that rolling 12-month period will be deemed to have occurred so long as the calendar year throughput and ethanol content are below the annual throughput and ethanol content limitations. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Records shall be maintained that demonstrate the date of each year's start of crush season. [District Rule 2201] Federally Enforceable Through Title V Permit

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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-447-287-1

ISSUANCE DATE: DRAFT

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:
613,913 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6655) 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 Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 824 lb, 2nd quarter - 825 lb, 3rd quarter - 825 lb, and fourth quarter - 825 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 04/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Numbers N-2-1, S-4025-1, S-3805-1, S-3807-1, S-3808-1 (or a certificate split from these certificates) 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. This Authority to Construct (ATC) cancels and supersedes ATC C-447-271-0. [District Rule 2201] Federally Enforceable Through Title V Permit

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-447-287-1 : Mar 21 2013 9:33AM – TOMS : Joint Inspection NOT Required

6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. When this tank is 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] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, the pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rule 4694] Federally Enforceable Through Title V Permit
10. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The weighted annual average ethanol content of wine stored in this tank, calculated on a twelve month rolling basis, shall not exceed 15 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The maximum wine storage throughput in this tank shall not exceed 615,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 4,438,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The annual VOC emissions from both wine fermentation and wine storage in this tank, calculated on a 12 month rolling basis, shall not exceed 3,299 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
15. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694] Federally Enforceable Through Title V Permit
16. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
17. The daily VOC emissions for fermentation operations in this tank shall not exceed 3.46 lb/day per 1000 gallons of tank capacity. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Annual VOC emissions from wine fermentation in this tank, calculated on a twelve month rolling basis, shall be determined by the following equation: E = 4.0 lb per 1000 gallons x annual red wine production (in gallons) + 1.6 lb per 1000 gallons x annual white wine production (in gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
19. The operator shall maintain records of the calculated 12 month rolling wine ethanol content and storage throughput rate (ethanol percentage by volume and gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
20. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and the uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. The permittee shall maintain the following records: red wine and white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury; the volume of each wine movement; and the calculated 12 month rolling wine ethanol content and throughput rate for storage operations and VOC emission rate for fermentation operations (ethanol percentage by volume, gallons and lb-VOC per 12 month rolling period, calculated monthly). [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

22. If the throughput or ethanol content calculated for any rolling 12-month period exceeds the annual throughput or ethanol content limitations of this permit, in a crush season in which the start of the crush season (defined as the day on which the facility's seasonal crushing/fermentation operations commence) occurs less than 365 days after the start of the previous crush season, then no violation of the throughput or ethanol content limits for that rolling 12-month period will be deemed to have occurred so long as the calendar year throughput and ethanol content are below the annual throughput and ethanol content limitations. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Records shall be maintained that demonstrate the date of each year's start of crush season. [District Rule 2201] Federally Enforceable Through Title V Permit

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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-447-288-1

ISSUANCE DATE: DRAFT

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:
615,603 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6656) 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 Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 824 lb, 2nd quarter - 825 lb, 3rd quarter - 825 lb, and fourth quarter - 825 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 04/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Numbers N-2-1, S-4025-1, S-3805-1, S-3807-1, S-3808-1 (or a certificate split from these certificates) 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. This Authority to Construct (ATC) cancels and supersedes ATC C-447-271-0. [District Rule 2201] Federally Enforceable Through Title V Permit

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-447-288-1 : Mar 21 2013 9:33AM – TOMS : Joint Inspection NOT Required

6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

7. When this tank is 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] Federally Enforceable Through Title V Permit

8. When this tank is used for wine storage, the pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

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

10. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit

11. The weighted annual average ethanol content of wine stored in this tank, calculated on a twelve month rolling basis, shall not exceed 15 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit

12. The maximum wine storage throughput in this tank shall not exceed 615,603 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit

13. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 4,438,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit

14. The annual VOC emissions from both wine fermentation and wine storage in this tank, calculated on a 12 month rolling basis, shall not exceed 3,299 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit

15. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694] Federally Enforceable Through Title V Permit

16. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

17. The daily VOC emissions for fermentation operations in this tank shall not exceed 3.46 lb/day per 1000 gallons of tank capacity. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Annual VOC emissions from wine fermentation in this tank, calculated on a twelve month rolling basis, shall be determined by the following equation: E = 4.0 lb per 1000 gallons x annual red wine production (in gallons) + 1.6 lb per 1000 gallons x annual white wine production (in gallons). [District Rule 2201] Federally Enforceable Through Title V Permit

19. The operator shall maintain records of the calculated 12 month rolling wine ethanol content and storage throughput rate (ethanol percentage by volume and gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit

20. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and the uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. The permittee shall maintain the following records: red wine and white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury; the volume of each wine movement; and the calculated 12 month rolling wine ethanol content and throughput rate for storage operations and VOC emission rate for fermentation operations (ethanol percentage by volume, gallons and lb-VOC per 12 month rolling period, calculated monthly). [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

22. If the throughput or ethanol content calculated for any rolling 12-month period exceeds the annual throughput or ethanol content limitations of this permit, in a crush season in which the start of the crush season (defined as the day on which the facility's seasonal crushing/fermentation operations commence) occurs less than 365 days after the start of the previous crush season, then no violation of the throughput or ethanol content limits for that rolling 12-month period will be deemed to have occurred so long as the calendar year throughput and ethanol content are below the annual throughput and ethanol content limitations. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Records shall be maintained that demonstrate the date of each year's start of crush season. [District Rule 2201] Federally Enforceable Through Title V Permit

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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-447-289-1 **ISSUANCE DATE:** DRAFT

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:
612,570 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6659) 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 Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 824 lb, 2nd quarter - 825 lb, 3rd quarter - 825 lb, and fourth quarter - 825 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 04/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Numbers N-2-1, S-4025-1, S-3805-1, S-3807-1, S-3808-1 (or a certificate split from these certificates) 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. This Authority to Construct (ATC) cancels and supersedes ATC C-447-271-0. [District Rule 2201] Federally Enforceable Through Title V Permit

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-447-289-1 : Mar 21 2013 8:33AM – TOMS : Joint Inspection NOT Required

6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. When this tank is 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] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, the pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rule 4694] Federally Enforceable Through Title V Permit
10. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The weighted annual average ethanol content of wine stored in this tank, calculated on a twelve month rolling basis, shall not exceed 15 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The maximum wine storage throughput in this tank shall not exceed 615,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 4,438,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The annual VOC emissions from both wine fermentation and wine storage in this tank, calculated on a 12 month rolling basis, shall not exceed 3,299 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
15. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694] Federally Enforceable Through Title V Permit
16. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
17. The daily VOC emissions for fermentation operations in this tank shall not exceed 3.46 lb/day per 1000 gallons of tank capacity. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Annual VOC emissions from wine fermentation in this tank, calculated on a twelve month rolling basis, shall be determined by the following equation: E = 4.0 lb per 1000 gallons x annual red wine production (in gallons) + 1.6 lb per 1000 gallons x annual white wine production (in gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
19. The operator shall maintain records of the calculated 12 month rolling wine ethanol content and storage throughput rate (ethanol percentage by volume and gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
20. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and the uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. The permittee shall maintain the following records: red wine and white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury; the volume of each wine movement; and the calculated 12 month rolling wine ethanol content and throughput rate for storage operations and VOC emission rate for fermentation operations (ethanol percentage by volume, gallons and lb-VOC per 12 month rolling period, calculated monthly). [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

22. If the throughput or ethanol content calculated for any rolling 12-month period exceeds the annual throughput or ethanol content limitations of this permit, in a crush season in which the start of the crush season (defined as the day on which the facility's seasonal crushing/fermentation operations commence) occurs less than 365 days after the start of the previous crush season, then no violation of the throughput or ethanol content limits for that rolling 12-month period will be deemed to have occurred so long as the calendar year throughput and ethanol content are below the annual throughput and ethanol content limitations. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Records shall be maintained that demonstrate the date of each year's start of crush season. [District Rule 2201] Federally Enforceable Through Title V Permit

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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-447-290-1

ISSUANCE DATE: DRAFT

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:
611,948 GALLON INSULATED STAINLESS STEEL WINE STORAGE TANK (TANK 6660) 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 Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 160 lb, 2nd quarter - 161 lb, 3rd quarter - 161 lb, and fourth quarter - 161 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 04/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Numbers N-2-1, S-4025-1, S-3805-1, S-3807-1, S-3808-1 (or a certificate split from these certificates) 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. This Authority to Construct (ATC) cancels and supersedes ATC C-447-290-0. [District Rule 2201] Federally Enforceable Through Title V Permit

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-447-290-1 : Mar 21 2013 8:33AM – TOMS : Joint Inspection NOT Required

6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. This tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
8. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rule 4694] Federally Enforceable Through Title V Permit
10. The weighted annual average ethanol content of wine stored in this tank, calculated on a twelve month rolling basis, shall not exceed 15 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The maximum wine storage throughput in this tank shall not exceed 615,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 4,438,235 gallons per year. [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] Federally Enforceable Through Title V Permit
14. Daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. The operator shall maintain records of the calculated 12 month rolling wine ethanol content and storage throughput rate (ethanol percentage by volume and gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
16. If the throughput or ethanol content calculated for any rolling 12-month period exceeds the annual throughput or ethanol content limitations of this permit, in a crush season in which the start of the crush season (defined as the day on which the facility's seasonal crushing/fermentation operations commence) occurs less than 365 days after the start of the previous crush season, then no violation of the throughput or ethanol content limits for that rolling 12-month period will be deemed to have occurred so long as the calendar year throughput and ethanol content are below the annual throughput and ethanol content limitations. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Records shall be maintained that demonstrate the date of each year's start of crush season. [District Rule 2201] Federally Enforceable Through Title V Permit
18. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-447-291-1

ISSUANCE DATE: DRAFT

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:
613,637 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6661) 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 Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 824 lb, 2nd quarter - 825 lb, 3rd quarter - 825 lb, and fourth quarter - 825 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 04/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Numbers N-2-1, S-4025-1, S-3805-1, S-3807-1, S-3808-1 (or a certificate split from these certificates) 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. This Authority to Construct (ATC) cancels and supersedes ATC C-447-271-0. [District Rule 2201] Federally Enforceable Through Title V Permit

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-447-291-1 : Mar 21 2013 9:34AM -- TOMS : Joint Inspection NOT Required

6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. When this tank is 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] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, the pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rule 4694] Federally Enforceable Through Title V Permit
10. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The weighted annual average ethanol content of wine stored in this tank, calculated on a twelve month rolling basis, shall not exceed 15 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The maximum wine storage throughput in this tank shall not exceed 615,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 4,438,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The annual VOC emissions from both wine fermentation and wine storage in this tank, calculated on a 12 month rolling basis, shall not exceed 3,299 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
15. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694] Federally Enforceable Through Title V Permit
16. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
17. The daily VOC emissions for fermentation operations in this tank shall not exceed 3.46 lb/day per 1000 gallons of tank capacity. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Annual VOC emissions from wine fermentation in this tank, calculated on a twelve month rolling basis, shall be determined by the following equation: E = 4.0 lb per 1000 gallons x annual red wine production (in gallons) + 1.6 lb per 1000 gallons x annual white wine production (in gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
19. The operator shall maintain records of the calculated 12 month rolling wine ethanol content and storage throughput rate (ethanol percentage by volume and gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
20. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and the uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. The permittee shall maintain the following records: red wine and white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury; the volume of each wine movement; and the calculated 12 month rolling wine ethanol content and throughput rate for storage operations and VOC emission rate for fermentation operations (ethanol percentage by volume, gallons and lb-VOC per 12 month rolling period, calculated monthly). [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

22. If the throughput or ethanol content calculated for any rolling 12-month period exceeds the annual throughput or ethanol content limitations of this permit, in a crush season in which the start of the crush season (defined as the day on which the facility's seasonal crushing/fermentation operations commence) occurs less than 365 days after the start of the previous crush season, then no violation of the throughput or ethanol content limits for that rolling 12-month period will be deemed to have occurred so long as the calendar year throughput and ethanol content are below the annual throughput and ethanol content limitations. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Records shall be maintained that demonstrate the date of each year's start of crush season. [District Rule 2201] Federally Enforceable Through Title V Permit

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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-447-292-1

ISSUANCE DATE: DRAFT

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:
616,758 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6662) 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 Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 824 lb, 2nd quarter - 825 lb, 3rd quarter - 825 lb, and fourth quarter - 825 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 04/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Numbers N-2-1, S-4025-1, S-3805-1, S-3807-1, S-3808-1 (or a certificate split from these certificates) 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. This Authority to Construct (ATC) cancels and supersedes ATC C-447-271-0. [District Rule 2201] Federally Enforceable Through Title V Permit

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-447-292-1 : Mar 21 2013 9:34AM – TOMS : Joint Inspection NOT Required

6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. When this tank is 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] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, the pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rule 4694] Federally Enforceable Through Title V Permit
10. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The weighted annual average ethanol content of wine stored in this tank, calculated on a twelve month rolling basis, shall not exceed 15 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The maximum wine storage throughput in this tank shall not exceed 616,758 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 4,438,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The annual VOC emissions from both wine fermentation and wine storage in this tank, calculated on a 12 month rolling basis, shall not exceed 3,299 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
15. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694] Federally Enforceable Through Title V Permit
16. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
17. The daily VOC emissions for fermentation operations in this tank shall not exceed 3.46 lb/day per 1000 gallons of tank capacity. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Annual VOC emissions from wine fermentation in this tank, calculated on a twelve month rolling basis, shall be determined by the following equation: E = 4.0 lb per 1000 gallons x annual red wine production (in gallons) + 1.6 lb per 1000 gallons x annual white wine production (in gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
19. The operator shall maintain records of the calculated 12 month rolling wine ethanol content and storage throughput rate (ethanol percentage by volume and gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
20. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and the uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. The permittee shall maintain the following records: red wine and white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury; the volume of each wine movement; and the calculated 12 month rolling wine ethanol content and throughput rate for storage operations and VOC emission rate for fermentation operations (ethanol percentage by volume, gallons and lb-VOC per 12 month rolling period, calculated monthly). [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

22. If the throughput or ethanol content calculated for any rolling 12-month period exceeds the annual throughput or ethanol content limitations of this permit, in a crush season in which the start of the crush season (defined as the day on which the facility's seasonal crushing/fermentation operations commence) occurs less than 365 days after the start of the previous crush season, then no violation of the throughput or ethanol content limits for that rolling 12-month period will be deemed to have occurred so long as the calendar year throughput and ethanol content are below the annual throughput and ethanol content limitations. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Records shall be maintained that demonstrate the date of each year's start of crush season. [District Rule 2201] Federally Enforceable Through Title V Permit

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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-447-293-1

ISSUANCE DATE: DRAFT

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:
615,000 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6663) 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 Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantities of emissions: 1st quarter - 824 lb, 2nd quarter - 825 lb, 3rd quarter - 825 lb, and fourth quarter - 825 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 04/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Numbers N-2-1, S-4025-1, S-3805-1, S-3807-1, S-3808-1 (or a certificate split from these certificates) 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. This Authority to Construct (ATC) cancels and supersedes ATC C-447-271-0. [District Rule 2201] Federally Enforceable Through Title V Permit

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-447-293-1 : Mar 21 2013 9:34AM -- TOMS : Joint Inspection NOT Required

6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. When this tank is 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] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, the pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rule 4694] Federally Enforceable Through Title V Permit
10. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The weighted annual average ethanol content of wine stored in this tank, calculated on a twelve month rolling basis, shall not exceed 15 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The maximum wine storage throughput in this tank shall not exceed 615,000 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The maximum wine storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 4,438,235 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The annual VOC emissions from both wine fermentation and wine storage in this tank, calculated on a 12 month rolling basis, shall not exceed 3,299 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
15. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694] Federally Enforceable Through Title V Permit
16. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
17. The daily VOC emissions for fermentation operations in this tank shall not exceed 3.46 lb/day per 1000 gallons of tank capacity. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Annual VOC emissions from wine fermentation in this tank, calculated on a twelve month rolling basis, shall be determined by the following equation: E = 4.0 lb per 1000 gallons x annual red wine production (in gallons) + 1.6 lb per 1000 gallons x annual white wine production (in gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
19. The operator shall maintain records of the calculated 12 month rolling wine ethanol content and storage throughput rate (ethanol percentage by volume and gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
20. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and the uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. The permittee shall maintain the following records: red wine and white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury; the volume of each wine movement; and the calculated 12 month rolling wine ethanol content and throughput rate for storage operations and VOC emission rate for fermentation operations (ethanol percentage by volume, gallons and lb-VOC per 12 month rolling period, calculated monthly). [District Rules 2201 and 4694] Federally Enforceable Through Title V Permit

22. If the throughput or ethanol content calculated for any rolling 12-month period exceeds the annual throughput or ethanol content limitations of this permit, in a crush season in which the start of the crush season (defined as the day on which the facility's seasonal crushing/fermentation operations commence) occurs less than 365 days after the start of the previous crush season, then no violation of the throughput or ethanol content limits for that rolling 12-month period will be deemed to have occurred so long as the calendar year throughput and ethanol content are below the annual throughput and ethanol content limitations. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Records shall be maintained that demonstrate the date of each year's start of crush season. [District Rule 2201] Federally Enforceable Through Title V Permit

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

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-447-294-1

ISSUANCE DATE: DRAFT

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:
615,446 GALLON INSULATED STAINLESS STEEL RED AND WHITE WINE FERMENTATION AND STORAGE TANK (TANK 6664) 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 Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
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Seyed Sadredin, Executive Director/APCO

DRAFT

DAVID WARNER, Director of Permit Services

C-447-294-1 : Mar 21 2013 9:34AM – TOMS : Joint Inspection NOT Required

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7. When this tank is 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] Federally Enforceable Through Title V Permit
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