



AUG 30 2011

Mr. Lupe Munoz
E & J Gallo Winery
1800 West River Road
Livingston, CA 95334

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # N-1237
Project # N-1110722**

Dear Mr. Munoz:

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. This project is to use seven existing grape juice storage tanks to ferment red and white wine.

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. Rupl Gill, Permit Services Manager, at (209) 557-6400.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

DW:WMS/st

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
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Southern Region
34946 Flyover Court
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San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT



HEALTHY AIR LIVING™

AUG 30 2011

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

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # N-1237
Project # N-1110722**

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 1800 West River Road, Livingston, CA 95334, 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. This project is to use seven existing grape juice storage tanks to ferment red and white wine.

After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 45-day comment period that begins on the date you receive this letter. If you have any questions, please contact Mr. Rupi Gill, Permit Services Manager, at (209) 557-6400.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

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AUG 30 2011

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

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # N-1237
Project # N-1110722**

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. This project is to use seven existing grape juice storage tanks to ferment red and white wine.

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. Rupi Gill, Permit Services Manager, at (209) 557-6400.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

DW:WMS/st

Enclosures

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Merced Sun Star

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

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control District solicits public comment on the proposed modification of E & J Gallo Winery for its Winery 1800 West River Road, Livingston, CA 95334, California. This project is to use seven existing grape juice storage tanks to ferment red and white wine.

The District's analysis of the legal and factual basis for this proposed action, project #N-1110722, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. This will be the public's only opportunity to comment on the specific conditions of the modification. If requested by the public, the District will hold a public hearing regarding issuance of this modification. For additional information, please contact Mr. Rupi Gill, Permit Services Manager, at (209) 557-6400. Written comments on the proposed initial permit must be submitted within 30 days of the publication date of this notice to DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 4800 ENTERPRISE WAY, MODESTO, CA 95356-8718.

San Joaquin Valley Air Pollution Control District Authority to Construct

Conversion of Seven existing tanks (Non-Wine Service) to Red/White Wine Fermentation Tanks

Facility Name: E & J Gallo Winery Date: June 15, 2011
Mailing Address: 18000 West River Road Engineer: Wai-Man So
Livingston, CA 95334 Lead Engineer: Nick Peirce
Contact Person: Lupe Munoz (Plant Manager) Kimberley Burns
Telephone: (209) 394 – 6211 (559) 349 – 3643
Fax: (209) 341 – 2764
Email: Lupe.munoz@eigallo.com kim.burns@eigallo.com
Application #(s): N-1237-483-0 through -489-0
Project #: N-1110722
Deemed Complete: April 19, 2011

I. PROPOSAL

E & J Gallo Winery is requesting Authorities to Construct (ATC) for the conversion of seven existing grape juice storage tanks (non-wine service) to red and white wine fermentation tanks.

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

II. APPLICABLE RULES

District Rule 2201	New and Modified Stationary Source Review (04/21/11)
District Rule 2520	Federally Mandated Operating Permits (06/21/01)
District Rule 4001	New Source Performance Standards (04/14/99)
District Rule 4002	National Emissions Standards for Hazardous Air Pollutants (05/02/04)
District Rule 4101	Visible Emissions (02/17/05)
District Rule 4102	Public Nuisance (12/17/92)
District Rule 4694	Wine Fermentation and Storage Tanks (12/15/05)
CH & SC 41700	Public Nuisance

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 18000 West River Road, in Livingston, California. The District has verified that this facility is not located within 1,000 feet of the outer boundary of any K-12 school. Therefore, the school noticing requirements of California Health and Safety Code, Section 42301.6 do not apply.

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 (CO₂) 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 CO₂. 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 CO₂ 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

N-1237-483-0

333,000 GALLON STAINLESS STEEL RED AND WHITE WINE FERMENTATION TANK
(TANK # 3004)

N-1237-484-0

333,000 GALLON STAINLESS STEEL RED AND WHITE WINE FERMENTATION TANK
(TANK # 3005)

N-1237-485-0

335,000 GALLON STAINLESS STEEL RED AND WHITE WINE FERMENTATION TANK
(TANK # 3007)

N-1237-486-0

335,000 GALLON STAINLESS STEEL RED AND WHITE WINE FERMENTATION TANK
(TANK # 3008)

N-1237-487-0

335,000 GALLON STAINLESS STEEL RED AND WHITE WINE FERMENTATION TANK
(TANK # 3011)

N-1237-488-0

335,000 GALLON STAINLESS STEEL RED AND WHITE WINE FERMENTATION TANK
(TANK # 3012)

N-1237-489-0

104,000 GALLON STAINLESS STEEL RED AND WHITE WINE FERMENTATION TANK
(TANK # 1001)

VI. EMISSION CONTROL TECHNOLOGY EVALUATION

VOCs (ethanol) are emitted from the wine fermentation process. The proposed temperature-controlled open top tanks limit the emissions by requiring the maximum average fermentation temperature to 95°F, which is the achieved in practice control technologically for this type of operation.

VII. EMISSIONS CALCULATIONS

A. Assumptions

- VOC is the only pollutant concern associated to this project.
- Annual fermentation throughput for each tank is 560,000 gallons.
- Other assumptions will be stated as they are made.

B. Emission Factors (EF)

Pre-Project Emissions Factor (EF1)

N-1237-483-0 through -489-0

These are new emissions units. Therefore, EF1 is equal to zero for each unit.

Post-Project Emissions Factor (EF2)

N-1237-483-0 through -489-0

Emissions factors are taken from District FYI-114, *VOC Emission Factors for Wine Fermentation and Storage Tanks*, as follows:

Wine Type	EF2 (lb-VOC/1,000 gallon of wine)		Source
	Daily	Annual	
White	1.62	2.5	FYI-114
Red	3.46	6.2	FYI-114

Since these tanks can ferment either white or red wine, therefore, worst case emissions factors of red wine will be used to calculate the maximum potential emissions.

C. Potential to Emit (PE)

1. Daily and Annual PE

Pre-Project Potential Emissions (PE1)

N-1237-483-0 through -489-0

These are new emissions units. Therefore, PE1 is equal to zero for each unit.

Post-Project Potential Emissions (PE2)

N-1237-483-0 through -489-0

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 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_{red} (lb-VOC/1,000 gal) x annual throughput (gal/yr)

Permit Unit	Daily EF	Annual EF	Tank Capacity	Turnover rate	Annual Throughput	Daily	Annual
	(lb-VOC/1,000 gal)	(lb-VOC/1,000 gal)	(gallon)	(tank/day)	(gal/yr)	(lb/day)	(lb/yr)
N-1237-483-0	3.46	6.2	333,000	1	560,000	1,152.2	3,472
N-1237-484-0			333,000			1,152.2	3,472
N-1237-485-0			335,000			1,159.1	3,472
N-1237-486-0			335,000			1,159.1	3,472
N-1237-487-0			335,000			1,159.1	3,472
N-1237-488-0			335,000			1,159.1	3,472
N-1237-489-0			104,000			359.8	3,472
Total			2,110,000				24,304

2. Quarterly Emission Changes (ΔPE)

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

QEC (lb/quarter) = [Annual PE2 – Annual PE1] (lb/year) / 4 (quarter/year)

N-1237-483-0 through -489-0

Annual VOC emission for each permit unit is identical. Therefore, quarterly VOC emission for each permit unit is calculated and listed as follow:

QEC (lb/quarter) = [3,472 – 0] (lb/year) / 4 (quarter/year) = 868 lb-VOC/quarter

Pollutant	Quarterly Net Emission Changes (QNEC)			
	1 st Quarter (lb-VOC/quarter)	2 nd Quarter (lb-VOC/quarter)	3 rd Quarter (lb-VOC/quarter)	4 th Quarter (lb-VOC/quarter)
VOC	868	868	868	868

3. Adjusted increase in Permitted Emissions (AIPE)

AIPE is used to determine if Best Available Control Technology (BACT) is required for emission units that are being modified.

These are new emissions unit. Therefore, AIPE calculations are not required.

D. Facility Emissions

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

Pursuant to District Rule 2201, § 4.9, 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 involves only VOC emissions, and the current VOC emissions from this facility are already above the Offset and Major Source Thresholds for VOC emissions. Therefore, SSPE1 calculations are not necessary.

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

Pursuant to District Rule 2201, § 4.10, 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 involves only VOC emissions, and the VOC emissions of this facility are already above the Offset and Major Source Thresholds for VOC emissions. Therefore, SSPE2 calculations are not necessary.

3. Stationary Source Increase in Permitted Emissions (SSIPE)

SSIPE calculations are used to determine if the project triggers public notice pursuant to District Rule 2201, § 5.4.5. If SSIPE results greater than 20,000 lb/yr for any one pollutant then project requires public notification. At this time, it is District Practice to define the SSIPE as the difference of SSPE2 to SSPE1.

This project involves only VOC emissions, and the $SSIPE_{VOC}$ is equal to the total $PE2_{VOC}$ associated to this project of 24,304 lb-VOC/year, which is greater than 20,000 lb/yr. Therefore, public notification for this purpose is required.

4. Major Source Determination

Pursuant to District Rule 2201, Section 3.23, a major source is a stationary source a Post-Project Stationary Source Potential to Emit (SSPE2), equal to or exceeding one or more of the Major Source threshold values (excluding ERCs banked onsite that have not been used onsite).

This facility is an existing Major Source of VOC emissions and will remain a Major Source of VOC emissions as a result of this project.

5. Baseline Emissions (BE)

The BE calculation (in lb/year) is performed on a pollutant-by-pollutant basis to determine the amount of offsets required, where necessary, when the SSPE1 is greater than the offset threshold. Pursuant to section 3.7, baseline emissions shall be equal to the sum of:

BE = Pre-project Potential to Emit for:

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

Otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to section 3.22.

Since these are new emissions unit. Therefore, the baseline emissions are equal to the pre-project potential to emit for each unit, BE = PE1 = 0.

6. SB 288 Major Modification

SB 288 Major Modification calculation is to determine the following:

- a. Pursuant to District Rule 2201, section 4.1.3, if Best Available Control Technology (BACT) is triggered for a new or modified emission unit that results in a Major Modification; and
- b. Pursuant to District Rule 2201, section 5.4.1, if a public notification is triggered.

As shown in Section VII.D.4 of this document, this facility is an existing Major Source for VOC emissions. In order to determine whether a SB 288 Major Modification can be triggered, the Net Emissions Increase (NEI) is calculated and is compared with the SB 288 Major Modification threshold limit of 50,000 lb-VOC/year listed on Table 3-5 of Rule 2201, section 3.36.

NEI can be calculated as the sum of the difference of post-project potential emissions (PE2) and historical emissions (HE) for the emissions units involved in this project. Since

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

$$NEI = \sum(PE_2 - HE)_{New}$$

Where:

$$HE_{New} = 0$$

$$\begin{aligned} NEI &= \sum(PE_2 - HE)_{New} \\ &= (24,304 - 0) \\ &= 24,304 \text{ lb-VOC/year} \end{aligned}$$

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

7. Federal Major Modification

Federal Major Modification is to determine the following:

- a. Pursuant to Rule 2201, section 4.2.3.5, if a Rule-compliance project qualifies for District Rule 2201's Best Available Control Technology (BACT) and offset exemptions and
- b. Pursuant to Rule 2201, section 4.15.1, if an Alternate Siting analysis must be performed; and if the applicant must provide certification that all California stationary sources owned, operated, or controlled by the applicant that are subject to emission limits are in compliance with those limits or are on a schedule for compliance with all applicable emission limits and standards; and
- c. Pursuant to Rule 2201, section 5.4.1, if a public notification is triggered.

This facility is an existing Major Source for VOC emissions. In order to determine whether a Federal Major Modification can be triggered, the Net Emissions Increase (NEI) is calculated and is compared with the significant threshold limit of 0 lb-VOC/year listed on Table 3-1 of Rule 2201, section 3.18.1.4.

NEI can be calculated as the sum of the difference of the project actual emissions (PAE) and baseline actual emissions (BAE) for the emissions units involved in this project. Since this project involves only new emissions units, and no change to the existing emissions units. The baseline actual emissions for the new units are each equal to zero. Thus,

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

Where:

$$BAE_{New} = 0$$

$$\begin{aligned}
 \text{NEI} &= \sum(\text{PAE} - \text{BAE})_{\text{New}} \\
 &= (24,304 - 0) \\
 &= 24,304 \text{ lb-VOC/year}
 \end{aligned}$$

NEI is greater than 0 lb-VOC/yr. Therefore, the proposed project is a Federal Major Modification for VOC emissions.

VIII. COMPLIANCE

District Rule 2201 New and Modified Stationary Source Review Rule

1. Best Available Control Technology (BACT)

Pursuant to District Rule 2201, § 4.1.1, BACT requirements are triggered in a pollutant-by-pollutant basis for new emissions unit with a Potential to Emit (PE) exceeding 2.0 lb/day, unless the unit is otherwise exempt per section 4.2. Section 4.2.1 provides an exemption from BACT requirements for CO emissions if the facility is located in a CO attainment area and the SSPE_{2CO} is less than 200,000 lb/yr. As well, BACT may be triggered if the modification is an SB 288 Major Modification or Federal Major Modification per section 4.1.3.

As shown in section VII.C.1, PE of VOC emission from each new fermentation tank exceeds 2.0 lb/day. In addition, as shown in section VII.D.7, this project constitutes a Federal Major Modification. Therefore, BACT is triggered and required for each tank associated with this project.

BACT Guideline 5.4.14 lists VOC emissions control requirements for Wine Fermentation Tanks. The requirement is listed in the following table:

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible
VOC	Temperature-Controlled Open Top Tank with Maximum Average Fermentation Temperature of 95 °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)

The "Top-Down BACT Analysis" for VOC emissions is performed in Appendix II of this document.

Pursuant to the analysis, BACT for VOC emissions has been satisfied with the following:

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

The following conditions will be placed on each ATC to ensure compliance with the BACT requirements:

- *The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95°F, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201]*
- *For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and the uncontrolled fermentation emissions and any fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rules 2201 and 4694]*

2. Offsets

Offsets are examined on a pollutant-by-pollutant basis, and are triggered for any pollutant with a SSPE2 equal to or greater than the values listed in § 4.5.3, table 4-1.

As discussed above, this facility is an existing Major Source for VOC emissions, and the SSPE2 of VOC exceeds the offsets threshold. Therefore, offset calculations are required, and pursuant to § 4.7.1, emission offset is calculated as the sum of differences between the PE2 and the BE of all the new and modified emissions units, plus all increases in Cargo Carrier emissions. The emissions offset are calculated as follow:

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

Where,
PE2 is post project potential to emit
BE is baseline emissions
DOR is the distance offset ratio determined under Rule 2201, § 4.8
ICCE is Increase in Cargo Carrier emissions

There are no increases in Cargo Carrier emissions as result of this project, and the proposed project constitutes a Federal Major Modification, which result DOR = 1.5. Then,

$$\text{Emission offset} = \sum (\text{PE2} - \text{BE}) \times 1.5 + 0$$

$$\text{Emission offset} = [\sum (\text{PE2} - \text{BE})_{\text{Existing units}} + \sum (\text{PE2} - \text{BE})_{\text{New units}}] \times 1.5$$

This project involves only new emission units and no modification to the existing units. Therefore, PE2 = BE for each existing units, results $\sum (\text{PE2} - \text{BE})_{\text{Existing units}} = 0$. Thus,

$$\text{Emission offset} = \sum (\text{PE2} - \text{BE})_{\text{New units}} \times 1.5$$

For new emission unit, BE = 0. Thus,

$$\text{Emission offset} = \Sigma (\text{PE2} - 0)_{\text{New units}} \times 1.5$$

As shown in section VII.C.1 of this document, $\Sigma \text{PE2}_{\text{New units}}$ is calculated to 24,304 lb-VOC/yr.

$$\text{Emission offset required} = 24,304 \times 1.5 \text{ lb-VOC/yr} = 36,456 \text{ lb-VOC/yr}$$

As shown above, offset are required for this project. The applicant has proposed to utilize ERC certificate C-1066-1 to offset the increase of VOC emissions in this project. The available credit on this certificate is listed in the table below:

ERC C-1066-1	1 st Quarter (lb)	2 nd Quarter (lb)	3 rd Quarter (lb)	4 th Quarter (lb)
VOC	17,500	17,500	17,500	17,500

As shown in section VII.C.2 of this document, the quarterly VOC emissions from each new fermentation tank are:

Each Permit	1 st Quarter (lb)	2 nd Quarter (lb)	3 rd Quarter (lb)	4 th Quarter (lb)
VOC	868	868	868	868

There are total seven tanks, the total quarterly VOC emissions from this project are:

Total	1 st Quarter (lb)	2 nd Quarter (lb)	3 rd Quarter (lb)	4 th Quarter (lb)
VOC	6,076	6,076	6,076	6,076

This project constitutes a Federal Major Modification, which requires offset ratio of 1.5 to 1, the required total quarterly offset for this project are:

Total Offset	1 st Quarter (lb)	2 nd Quarter (lb)	3 rd Quarter (lb)	4 th Quarter (lb)
VOC	9,114	9,114	9,114	9,114

The amount of credit of the ERC certificate after offset is summarized in the table below:

ERC C-1066-1:

VOC	1 st Quarter (lb)	2 nd Quarter (lb)	3 rd Quarter (lb)	4 th Quarter (lb)
Available Offset	17,500	17,500	17,500	17,500
Total Reserved	(7,311)	(7,311)	(7,294)	(7,292)
Minus Offset required for this project	(9,114)	(9,114)	(9,114)	(9,114)
Remaining Offset	1,075	1,075	1,092	1,094

Therefore, the ERC certificate C-1066-1 has sufficient credits to fully offset the increase of VOC emissions in this project.

To ensure the emission credits from ERC Certificate C-1066 utilize for offset the increase of VOC emissions in this project, the following conditions will be listed on each ATC:

- *ERC certificate C-1066-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]*
- *Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 868 lb, 2nd quarter - 868 lb, 3rd quarter - 868 lb, and 4th quarter - 868 lb. Offsets shall be provided at an offset ratio 1.5 to 1. [District Rule 2201]*

3. Public Notification

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

- New Major Sources
- Federal Major Modifications
- SB 288 Major Modifications
- New emission units with a PE > 100 lb/day of any one pollutant
- Modifications with SSPE1 below an Offset threshold and SSPE2 above an Offset threshold on a pollutant-by-pollutant basis
- New stationary sources with SSPE2 exceeding Offset thresholds
- Any permitting action with a SSIPE exceeding 20,000 lb/yr for any one pollutant

This project triggers a Federal Major Modification, and the potential VOC emissions are greater than 100 pounds per day for each new fermentation tank. Therefore, a 30-day public notice is required for this project.

4. Daily Emission Limits (DELs)

Daily Emissions Limitations (DELs) and other enforceable conditions are required by § 3.15 to restrict a unit's maximum daily emissions. Therefore, the following conditions will be listed on each permit:

- *The daily VOC emissions rate for wine fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201]*

5. Compliance Assurance

Source Testing

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

Monitoring

No monitoring is required to demonstrate compliance with Rule 2201.

Record Keeping

Recordkeeping is required to demonstrate compliance with the offsets, public notification and daily emission limit requirements of Rule 2201. In addition, recordkeeping is also required for winery tanks per Rule 4694. Therefore, the following conditions will be listed on each permit:

- *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 Rule 4694, 6.4.1]*
- *Records of total annual fermentation emissions, including calculation methods and parameters used, shall be maintained. [District Rule 1070 and 2201]*
- *Separate annual records of total red wine and total white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury, shall be maintained. [District Rules 1070 and 2201]*
- *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]*

6. Ambient Air Quality Analysis

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

This project involves only VOCs (mainly ethanol) for which AAQS does not exist; therefore, AAQA is not performed for this project.

7. Additional Requirements for new Major Source and Federal Major Modifications

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

Per section 4.15.1, Alternative Siting Analysis:

The current project occurs at an existing winery with a pre-project total wine tank volume of 151,359,891 gallons. The applicant proposes to install new winery tanks totaling 2,110,000 gallons in volume, which represents an increase of 0.01% of the existing total wine tank volume. 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.

Per section 4.15.2, Compliance Certification:

A source undergoing a Major Modification to demonstrate to the satisfaction of the District that all other Major Sources owned by such person and operating in California are in compliance or are on a schedule for compliance with all applicable emission limitations and standards.

This project constitutes a Federal Major Modification. Therefore, compliance certification is required, and a copy of compliance certification from the facility is included in Appendix III of this document.

Therefore, compliance with the requirements of this Rule is expected.

District Rule 2520 Federally Mandated Operating Permits

E & J Gallo Winery possesses a Title V permit. The proposed project is considered a Significant Modification to the Title V permit since this project triggers a Federal Major Modification under Rule 2201. Therefore, the following conditions will be listed on each permit:

- *{1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule]*

- *{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]*

In accordance with Rule 2520, the application meets the procedural requirements of section 11.4 by including:

- A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs and
- The source's suggested draft permit (Appendix I of this document) and
- Certification by a responsible official that the proposed modification meets the criteria for use of major permit modification procedures and a request that such procedures be used (Appendix III of this document)

Section 5.3.4 of this rule requires the permittee shall file an application for administrative permit amendments prior to implementing the requested change except when allowed by the operational flexibility provisions of section 6.4 of this rule.

E & J Gallo Winery is expected to notify the District by filing TV Form-008 upon implementing the ATCs. Therefore, compliance with the requirements of this Rule is expected.

District 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 tank operations.

District 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 tank operations.

District Rule 4101 Visible Emissions

District Rule 4101, Section 5.0, indicates that no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour, which is dark or darker than Ringlemann 1 or equivalent to 20% opacity. Therefore, the following conditions will be listed on each permit:

- *{15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]*

District Rule 4102 Nuisance

Section 4.0 prohibits discharge of air contaminants, which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, the following conditions will be listed on each permit:

- *{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 1905-1 (March 2, 2001) - 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 an HAP as defined by Section 44321 of the California Health and Safety Code. 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.

Section 5.1 requires the winery operator achieve Required Annual Emissions Reductions (RAER) equal to at least 35% of the winery's Baseline Fermentation Emissions (BFE). Per the definition of RAER in Section 3.25 of the Rule, the RAER may be achieved by any combination of Fermentation Emission Reductions (FER), Certified Emission Reductions (CER) or District Obtained Emission Reductions (DOER) as established in the facility's District-approved Rule 4694 Compliance Plan, due every three years on December 1st beginning in 2006. The facility has submitted the required plan to the District and is currently satisfying the required emission reductions in the form of Certified Emission Reductions.

The following condition on the facility-wide permit (unit 0-2) 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, 6.1]

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

The following conditions on the facility-wide permit (unit 0-2) 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, 6.1]*
- *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, 6.3]*
- *Operators using CER to mitigate fermentation emissions shall perform all monitoring and recordkeeping, as established in their approved Three-Year Compliance Plan, and shall maintain all records necessary to demonstrate compliance. [District Rule 4694]*

Section 6.4.1 requires that records be kept for each fermentation batch. The following condition will be placed on each permit to ensure compliance with the requirements of Section 6.4.1.

- *For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, uncontrolled fermentation emissions, and fermentation emissions reductions. The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rule 4694, 6.4.1]*

Section 6.4 requires that records required by this rule be maintained, retained on-site for a minimum of five years, and made available to the APCO upon request. The following condition will be placed on each permit 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 Health & Safety Code 42301.6 (School Notice)

As discussed in Section III of this document, the California Health and Safety Code 42301.6 requirement does not apply to this project.

California Environmental Quality Act (CEQA)

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

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

Greenhouse Gas (GHG) Significance Determination

It is determined that no other agency has or will prepare an environmental review document for the project. Thus the District is the Lead Agency for this project. District FYI-260, *Greenhouse Gas Emissions from Wine Fermentation Processes*, establishes that for the purpose of calculating potential increases in greenhouse gas (GHG) emissions, CO₂ emissions from wine fermentation processes are considered carbon neutral. Therefore, the District concludes that the project would have a less than cumulatively significant impact on global climate change.

District CEQA Findings

The District determined that no other agency has broader discretionary approval power over the project and that the District is the first agency to act on the project, therefore establishing the District as the Lead Agency for the project (CEQA Guidelines §15051(b)). An Initial Study was prepared, which demonstrated that through a combination of project design elements, compliance with District rules, permit conditions, and mitigation measures, the project would have a less than significant effect on the environment. Consistent with CEQA Guidelines §15072(a), the District will publish a Notice of Intent to Adopt a Mitigated Negative Declaration for the project and provide a 30-day public comment period. Prior to making a final determination regarding approval of the project, the District will consider any comments received during the public review process.

IX. RECOMMENDATION

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue Authorities to Construct N-1237-483-0 through N-1237-489-0 subject to the permit conditions listed on the attached draft Authorities to Construct in Appendix I.

X. BILLING INFORMATION

Annual Permit Fees				
Permit Number	Previous Fee Schedule	Fee Schedule	Fee Description	Annual Fee
N-1237-483-0	N/A	3020-05-E (100,000 or Greater but less than 500,000 gallon)	333,000 gallons	\$ 246
N-1237-484-0	N/A	3020-05-E (100,000 or Greater but less than 500,000 gallon)	333,000 gallons	\$ 246
N-1237-485-0	N/A	3020-05-E (100,000 or Greater but less than 500,000 gallon)	335,000 gallons	\$ 246
N-1237-486-0	N/A	3020-05-E (100,000 or Greater but less than 500,000 gallon)	335,000 gallons	\$ 246
N-1237-487-0	N/A	3020-05-E (100,000 or Greater but less than 500,000 gallon)	335,000 gallons	\$ 246
N-1237-488-0	N/A	3020-05-E (100,000 or Greater but less than 500,000 gallon)	335,000 gallons	\$ 246
N-1237-489-0	N/A	3020-05-E (100,000 or Greater but less than 500,000 gallon)	104,000 gallons	\$ 246

APPENDICES

- Appendix I: Draft Authorities to Construct (ATC)*
- Appendix II: BACT Guideline & Top-Down BACT Analysis*
- Appendix III: Compliance Certification*

Appendix I

Draft Authorities to Construct (ATC)

N-1237-483-0 through N-1237-489-0

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: N-1237-483-0

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY
MAILING ADDRESS: 18000 W RIVER RD
LIVINGSTON, CA 95334

LOCATION: 18000 W RIVER RD
LIVINGSTON, CA 95334

EQUIPMENT DESCRIPTION:
333,000 GALLON STAINLESS STEEL RED AND WHITE WINE FERMENTATION TANK (TANK 3004)

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 868 lb, 2nd quarter - 868 lb, 3rd quarter - 868 lb, and 4th quarter - 868 lb. Offsets shall be provided at an offset ratio 1.5 to 1. [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC certificate C-1066-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
6. The daily VOC emissions rate for wine fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
N-1237-483-0 - Jul 8 2011 1:03PM - BOW : Joint Inspection NOT Required

7. Total annual VOC emissions from wine fermentation for this tank shall not exceed 3,472 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Total annual VOC emissions from wine fermentation operations shall be determined by the following formula: Total annual VOC emissions = (Total Annual Red Wine Production - gallons) x (6.2 lb-VOC/1000 gallons) + (Total Annual White Wine Production - gallons) x (2.5 lb-VOC/1000 gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
9. 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
10. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rule 4694, 6.4.1]
11. Records of total annual fermentation emissions, including calculation methods and parameters used, shall be maintained. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit
12. Separate annual records of total red wine and total white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
13. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: N-1237-484-0

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY
MAILING ADDRESS: 18000 W RIVER RD
LIVINGSTON, CA 95334

LOCATION: 18000 W RIVER RD
LIVINGSTON, CA 95334

EQUIPMENT DESCRIPTION:
333,000 GALLON STAINLESS STEEL RED AND WHITE WINE FERMENTATION TANK (TANK 3005)

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 868 lb, 2nd quarter - 868 lb, 3rd quarter - 868 lb, and 4th quarter - 868 lb. Offsets shall be provided at an offset ratio 1.5 to 1. [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC certificate C-1066-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
6. The daily VOC emissions rate for wine fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director, APCO

DAVID WARNER, Director of Permit Services
N-1237-484-0 : Jul 8 2011 1:03PM - BOW : Joint Inspection NOT Required

7. Total annual VOC emissions from wine fermentation for this tank shall not exceed 3,472 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Total annual VOC emissions from wine fermentation operations shall be determined by the following formula: Total annual VOC emissions = (Total Annual Red Wine Production - gallons) x (6.2 lb-VOC/1000 gallons) + (Total Annual White Wine Production - gallons) x (2.5 lb-VOC/1000 gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
9. 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
10. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rule 4694, 6.4.1]
11. Records of total annual fermentation emissions, including calculation methods and parameters used, shall be maintained. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit
12. Separate annual records of total red wine and total white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
13. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: N-1237-485-0

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY
MAILING ADDRESS: 18000 W RIVER RD
LIVINGSTON, CA 95334

LOCATION: 18000 W RIVER RD
LIVINGSTON, CA 95334

EQUIPMENT DESCRIPTION:
335,000 GALLON STAINLESS STEEL RED AND WHITE WINE FERMENTATION TANK (TANK 3007)

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
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5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
6. The daily VOC emissions rate for wine fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

N-1237-485-0 : Jul 8 2011 1:03PM - SOW : Joint Inspection NOT Required

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

7. Total annual VOC emissions from wine fermentation for this tank shall not exceed 3,472 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Total annual VOC emissions from wine fermentation operations shall be determined by the following formula: Total annual VOC emissions = (Total Annual Red Wine Production - gallons) x (6.2 lb-VOC/1000 gallons) + (Total Annual White Wine Production - gallons) x (2.5 lb-VOC/1000 gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
9. 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
10. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rule 4694, 6.4.1]
11. Records of total annual fermentation emissions, including calculation methods and parameters used, shall be maintained. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit
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13. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: N-1237-486-0

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY
MAILING ADDRESS: 18000 W RIVER RD
LIVINGSTON, CA 95334

LOCATION: 18000 W RIVER RD
LIVINGSTON, CA 95334

EQUIPMENT DESCRIPTION:
335,000 GALLON STAINLESS STEEL RED AND WHITE WINE FERMENTATION TANK (TANK 3008)

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 868 lb, 2nd quarter - 868 lb, 3rd quarter - 868 lb, and 4th quarter - 868 lb. Offsets shall be provided at an offset ratio 1.5 to 1. [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC certificate C-1066-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
6. The daily VOC emissions rate for wine fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director APCO

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DAVID WARNER, Director of Permit Services
N-1237-486-0: Jul 8 2011 1:03PM - ROW : Joint Inspection NOT Required

7. Total annual VOC emissions from wine fermentation for this tank shall not exceed 3,472 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Total annual VOC emissions from wine fermentation operations shall be determined by the following formula: Total annual VOC emissions = (Total Annual Red Wine Production - gallons) x (6.2 lb-VOC/1000 gallons) + (Total Annual White Wine Production - gallons) x (2.5 lb-VOC/1000 gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
9. 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
10. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rule 4694, 6.4.1]
11. Records of total annual fermentation emissions, including calculation methods and parameters used, shall be maintained. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit
12. Separate annual records of total red wine and total white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
13. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
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PERMIT NO: N-1237-487-0

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY
MAILING ADDRESS: 18000 W RIVER RD
LIVINGSTON, CA 95334

LOCATION: 18000 W RIVER RD
LIVINGSTON, CA 95334

EQUIPMENT DESCRIPTION:
335,000 GALLON STAINLESS STEEL RED AND WHITE WINE FERMENTATION TANK (TANK 3011)

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 868 lb, 2nd quarter - 868 lb, 3rd quarter - 868 lb, and 4th quarter - 868 lb. Offsets shall be provided at an offset ratio 1.5 to 1. [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC certificate C-1066-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
6. The daily VOC emissions rate for wine fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director APCO

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DAVID WARNER, Director of Permit Services

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7. Total annual VOC emissions from wine fermentation for this tank shall not exceed 3,472 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Total annual VOC emissions from wine fermentation operations shall be determined by the following formula: Total annual VOC emissions = (Total Annual Red Wine Production - gallons) x (6.2 lb-VOC/1000 gallons) + (Total Annual White Wine Production - gallons) x (2.5 lb-VOC/1000 gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
9. 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
10. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rule 4694, 6.4.1]
11. Records of total annual fermentation emissions, including calculation methods and parameters used, shall be maintained. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit
12. Separate annual records of total red wine and total white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
13. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: N-1237-488-0

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY
MAILING ADDRESS: 18000 W RIVER RD
LIVINGSTON, CA 95334

LOCATION: 18000 W RIVER RD
LIVINGSTON, CA 95334

EQUIPMENT DESCRIPTION:
335,000 GALLON STAINLESS STEEL RED AND WHITE WINE FERMENTATION TANK (TANK 3012)

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
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5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
6. The daily VOC emissions rate for wine fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit

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Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

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7. Total annual VOC emissions from wine fermentation for this tank shall not exceed 3,472 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Total annual VOC emissions from wine fermentation operations shall be determined by the following formula: Total annual VOC emissions = (Total Annual Red Wine Production - gallons) x (6.2 lb-VOC/1000 gallons) + (Total Annual White Wine Production - gallons) x (2.5 lb-VOC/1000 gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
9. 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
10. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rule 4694, 6.4.1]
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12. Separate annual records of total red wine and total white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: N-1237-489-0

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY
MAILING ADDRESS: 18000 W RIVER RD
LIVINGSTON, CA 95334

LOCATION: 18000 W RIVER RD
LIVINGSTON, CA 95334

EQUIPMENT DESCRIPTION:
104,000 GALLON STAINLESS STEEL RED AND WHITE WINE FERMENTATION TANK (TANK 1001)

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
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DAVID WARNER, Director of Permit Services
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7. Total annual VOC emissions from wine fermentation for this tank shall not exceed 3,472 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
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11. Records of total annual fermentation emissions, including calculation methods and parameters used, shall be maintained. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit
12. Separate annual records of total red wine and total white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
13. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

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Appendix II

BACT Guideline & 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 a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

***This is a Summary Page for this Class of Source - Permit Specific BACT Determinations on Next Page(s)**

Top-Down BACT Analysis for VOC emissions

The following VOC emission control technologies are listed in BACT guideline 5.4.14, 2nd quarter of 2011 for Wine Fermentation Tank:

Step 1 - Identify all control technologies

Achieved in Practice or contained in the SIP:

Temperature-controlled open top tank with maximum average fermentation temperature of 95°F.

Technologically Feasible:

- 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)

Alternate Basic Equipment:

There is no alternate basic equipment listed on this guideline.

Step 2 - Eliminate technologically infeasible options

None of the above listed technologies are technologically infeasible.

Step 3 - Rank remaining options by control effectiveness

Rank by Control Effectiveness			
Rank	Option	Control	Overall Capture & Control Efficiency
1	2	Capture of VOCs and thermal oxidation	88%
2	3	Capture of VOCs and carbon adsorption	86%
3	4	Capture of VOCs and absorption.	81%
4	5	Capture of VOCs and condensation	81%
5	1	Temperature-controlled open top tank with maximum average fermentation temperature of 95°F	0 %

Step 4 - Cost Effectiveness Analysis

In 2009, the District prepared a BACT analysis, under engineering evaluation C-1090293, for the fermentation process and evaluated the cost effectiveness analysis for each of the above mentioned technologies.

The fundamental capital and annual costs information of the above BACT analysis was extracted from a case study prepared by the Eichleay Engineering Inc for this E & J Gallo Winery facility in 2005. The cost information from the Eichleay study along with the inflation rate of 3% per year were entered into the EPA Cost Model to estimate the cost effectiveness for each capture and control case, the summary sheets of these estimations are included in the following pages. According to this 2009 BACT analysis, the effectiveness costs for each control device are summarized below:

Control Device	Thermal Oxidize	RTO	Refrigerated Cond	Water Scrubber	Carbon Adsorption
Cost Effectiveness (\$/ton)	20,700	19,100	23,300	22,800	18,500

As a conservative assumption, the District will use an inflation rate of 3% per year to the above evaluated cost values to estimate the 2011 cost effectiveness values as follow:

$$\text{Inflation multiplier (IM)} = (1 + i)^n$$

Where, *i* is the inflation rate of 3%
n is the number of year

$$\text{IM}_{2009-2011} = (1 + 0.03)^2 = 1.0309$$

In 2011, the effectiveness costs for each control device are calculated and summarized below:

$$\text{Effectiveness cost}_{2011} = \text{Effectiveness cost}_{2009} \times \text{IM}_{2009-2011}$$

Control Device	Thermal Oxidize	RTO	Refrigerated Cond	Water Scrubber	Carbon Adsorption
Cost Effectiveness (\$/ton)	21,300	19,700	24,000	23,500	19,100

As shown above, the updated lowest evaluated value of \$19,100/ton exceeds the District's current cost effectiveness threshold of \$17,500/ton of VOC. Therefore, none of these technologies are cost-effective, and are not required at this time.

Step 5 - Select BACT

Temperature-controlled open top tank with maximum average fermentation temperature of 95°F would be the BACT for this process.

EPA Cost Model

Table 1
Total Capital Investment for VOC Control of Red Wine Fermentation

	Case 1 Thermal Ox	Case 2 RTO	Case 3 Refrigerated Condenser	Case 4 Water Scrub	Case 5 Carbon Adsorption
Direct Costs					
Purchased Equipment Costs					
Control Device	\$745,000	\$1,854,000	\$3,003,000	\$396,000	\$1,667,000
Knock Out Vessels	\$148,000	\$148,000	\$148,000	\$148,000	\$148,000
Subtotal Equipment (A)	\$893,000	\$2,002,000	\$3,151,000	\$544,000	\$1,815,000
Instrumentation (0.10 x A)	\$89,000	\$200,000	\$315,000	\$54,000	\$182,000
Sales Tax (0.08 x A)	\$71,000	\$160,000	\$252,000	\$44,000	\$145,000
Freight (0.05 x A)	\$45,000	\$100,000	\$158,000	\$27,000	\$91,000
Purchased Equipment Cost (PEC)	\$1,098,000	\$2,462,000	\$3,876,000	\$669,000	\$2,233,000
Direct Installation Costs for Purchased Equipment					
Foundations and Supports	\$88,000	\$197,000	\$310,000	\$54,000	\$179,000
Handling & Erection	\$154,000	\$345,000	\$543,000	\$94,000	\$313,000
Electrical	\$44,000	\$98,000	\$155,000	\$27,000	\$89,000
Piping	\$22,000	\$49,000	\$78,000	\$13,000	\$45,000
Direct Costs Not Included Above					
Structural Steel Pipeway	\$2,727,000	\$2,727,000	\$2,727,000	\$2,727,000	\$2,727,000
Ductwork	\$2,167,000	\$2,167,000	\$2,167,000	\$971,000	\$971,000
Pipeway Foundations	\$247,000	\$247,000	\$247,000	\$247,000	\$247,000
Site Prep	\$1,254,000	\$1,254,000	\$1,254,000	\$1,254,000	\$1,254,000
CIP System	\$5,468,000	\$5,468,000	\$5,468,000	\$5,468,000	\$5,468,000
Electrical Utility	\$391,000	\$391,000	\$391,000	\$391,000	\$391,000
Tank Modifications	\$487,000	\$487,000	\$487,000	\$487,000	\$487,000
Foam Over Control System	\$629,000	\$629,000	\$629,000	\$629,000	\$629,000
Heavy Lift Equipment	\$1,192,000	\$1,192,000	\$1,192,000	\$1,192,000	\$1,192,000
Subtotal	\$15,968,000	\$17,713,000	\$19,524,000	\$14,223,000	\$16,225,000
Construction Expense	\$1,277,000	\$1,417,040	\$1,561,920	\$1,137,840	\$1,298,000
Contractor's Fee	\$1,597,000	\$1,771,300	\$1,952,400	\$1,422,300	\$1,622,500
Total Direct Costs	\$18,842,000	\$20,901,340	\$23,038,320	\$16,783,140	\$19,145,500
Indirect Costs					
Engineering	\$2,826,000	\$3,135,000	\$3,456,000	\$2,517,000	\$2,872,000
Construction Management Expense	\$565,000	\$627,000	\$691,000	\$503,000	\$574,000
Start Up	\$22,000	\$49,000	\$78,000	\$13,000	\$45,000
Performance Test	\$11,000	\$25,000	\$39,000	\$7,000	\$22,000
Contingencies	\$2,227,000	\$2,474,000	\$2,730,000	\$1,982,000	\$2,266,000
Total Indirect Costs	\$5,651,000	\$6,310,000	\$6,994,000	\$5,022,000	\$5,779,000
Total Capital Investment	\$21,619,000	\$24,023,000	\$26,518,000	\$19,245,000	\$22,004,000

EPA Cost Model

Table 2
Annual Costs for VOC Control of Red Wine Fermentation

Control Device	Case 1 Thermal Ox	Case 2 RTO	Case 3 Refrigerated Cond.	Case 4 Water Scrubber	Case 5 Carbon Adsorption
Total Capital Investment	\$21,619,000	\$24,023,000	\$26,518,000	\$19,245,000	\$22,004,000
Direct Annual Costs					
Labor & Materials					
Operating Labor (.5 hr/shift-unit @ \$22.81/hour)	\$65,700	\$65,700	\$65,700	\$65,700	\$65,700
Supervisor (15% of operator cost)	\$9,900	\$9,900	\$9,900	\$9,900	\$9,900
Operating Materials (15% of total maintenance cost)	\$104,700	\$112,500	\$123,700	\$91,000	\$103,400
Maintenance Labor (0.5 hr/shift-unit @ \$38.60/hour)	\$49,400	\$29,200	\$29,200	\$29,200	\$29,200
Maintenance Materials (3% of TCI)	\$648,600	\$720,700	\$795,500	\$577,400	\$660,100
Utilities	\$1,263,600	\$239,500	\$399,600	\$2,194,400	\$407,200
Total Direct Annual Cost	\$2,141,900	\$1,177,500	\$1,423,600	\$2,967,600	\$1,275,500
Indirect Annual Costs					
Overhead (60% of labor & Mat'ls)	\$527,000	\$562,800	\$614,400	\$463,900	\$521,000
Administrative Charges (2% of TCI)	\$432,400	\$480,500	\$530,400	\$384,900	\$440,100
Property Taxes (2% TCI)	\$432,400	\$480,500	\$530,400	\$384,900	\$440,100
Insurance (1% TCI)	\$216,200	\$240,200	\$265,200	\$192,500	\$220,000
Capital Recovery (CRF = 0.163)	<u>\$3,523,900</u>	<u>\$3,915,700</u>	<u>\$4,322,400</u>	<u>\$3,136,900</u>	<u>\$3,586,700</u>
Total Indirect Annual Cost	\$5,131,900	\$5,679,700	\$6,262,800	\$4,563,100	\$5,207,900
Total Annualized Cost	\$7,273,800	\$6,857,200	\$7,686,400	\$7,530,700	\$6,483,400
Emission Reductions					
Uncontrolled Emissions tpy	407.70	407.70	407.70	407.70	407.70
Collection & Control Efficiency	88%	88%	81%	81%	86%
Annual Emission Reduction tpy	358.78	358.78	330.24	330.24	350.62
Natural Gas Emissions tpy	7.11	0.36	0.00	0.00	0.00
Net Emission Reduction tpy	351.67	358.42	330.24	330.24	350.62
Cost Effectiveness \$/ton	\$20,700	\$19,100	\$23,300	\$22,800	\$18,500

Appendix III

Compliance Certification

N-1237
E&J Gallo Winery-Livingston
Compliance Certification Statement
For Federal Major Permit Modifications
Compliance with District Rule 2201, Section 4.15.2

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



Mr. Steve Kidd
Vice President of Operations

04/13/11

Date