



**FEB 11 2016**

Mr. Todd Seely  
E & J Gallo Winery  
600 Yosemite Blvd  
Modesto, CA 95353

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)  
District Facility # N-3386  
Project # N-1153167**

Dear Mr. Seely:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. You requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. This project authorizes the installation of one spirits additive storage tank.

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

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

Thank you for your cooperation in this matter.

Sincerely,

Arnaud Marjollet  
Director of Permit Services

Enclosures

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

**Seyed Sadredin**  
Executive Director/Air Pollution Control Officer

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**San Joaquin Valley Air Pollution Control District**  
**Authority to Construct Application Review**  
Spirits Additive Storage Tank

Facility Name:	E & J Gallo Winery	Date:	February 8, 2016
Mailing Address:	600 Yosemite Blvd Modesto, CA 95353	Engineer:	Jesse A. Garcia
Contact Person:	Todd Seely	Lead Engineer:	Joven Refuerzo
Telephone:	(209) 341-8779		
Email:	Todd.seely@ejgallo.com		
Application #(s):	S-3386-505-0		
Project #:	S-1153167		
Deemed Complete:	November 6, 2015		

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## **I. Proposal**

E & J Gallo Winery has requested an Authority to Construct (ATC) permit for the installation of a new insulated spirits and spirits additive tank. This tank will be used for spirits and spirits additive storage only.

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

## **II. Applicable Rules**

Rule 2201	New and Modified Stationary Source Review Rule (4/21/11)
Rule 2410	Prevention of Significant Deterioration (6/16/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99)
Rule 4002	National Emissions Standards for Hazardous Air Pollutants (5/20/04)
Rule 4102	Nuisance (12/17/92)
Rule 4623	Storage of Organic Liquids (05/19/05)
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 600 Yosemite Blvd in Modesto, 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 red and white wines and distilled alcoholic beverages which are stored and processed in the subject storage tank. This tank may hold spirits and spirits additive with an ethanol contents up to 98% by volume.

### V. Equipment Listing

N-3386-505-0: 15,000 GALLON (NOMINAL) INSULATED STAINLESS STEEL DISTILLED SPIRITS AND SPIRITS ADDITIVE STORAGE TANK (TANK WSA1) WITH PRESSURE/VACUUM VALVE AND INSULATION

### VI. Emission Control Technology Evaluation

VOCs (ethanol) are emitted from spirits and spirits additive 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. When the storage tanks are insulated, breathing losses are considered to be negligible.

### VII. General Calculations

#### A. Assumptions

- The proposed tank will only be used for distilled spirits and spirits additive storage
- Typically, for enclosed tanks with refrigeration and/or insulation (or equivalent) and P/V valves, breathing losses from storage of spirits are assumed to be negligible
- Maximum daily liquid storage temperature = 77.3 °F (per FYI-295)
- Maximum annual liquid storage temperature = 61.6 °F (per FYI-295)
- Storage tank daily and annual maximum ethanol content of stored spirits/additive is 98%.
- Maximum storage throughput as proposed by applicant:

Tank	Daily Storage (gal/day)	Annual Storage (gal/year)
N-3386-505-0	32,258	1,000,000

**B. Emission Factors**

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

**C. Calculations**

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

Since this is a new emissions unit (storage), PE1 = 0 (all pollutants) for this tank.

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

The new distilled spirits and spirits additive tank will be used for storage only. Two Tanks 4.0 runs have been performed; one run was performed using the daily throughput times 31 and run in the month of July and then dividing the results by 31 to calculate the daily post-project potential to emit and one run using the annual throughput to calculate the annual post-project potential to emit. See Appendix A for the Tanks 4.0 runs and a summary of emissions from storage.

Tank	Daily PE2 (lb-VOC/day)	Annual PE2 (lb-VOC/yr)
N-3386-505-0	23.5	440

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

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

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

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

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

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

## 5. Major Source Determination

### Rule 2201 Major Source Determination:

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

### Rule 2410 Major Source Determination:

Rule 2410 applies to any pollutant regulated under the Clean Air Act, except those for which the District has been classified nonattainment. The only pollutant addressed by this project is VOC. Since the District is nonattainment for VOC, this project will not trigger PSD requirements for the tank. Therefore, PSD major source applicability will not be determined at this time.

## 6. Baseline Emissions (BE)

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

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

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

otherwise,

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

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

## 7. SB 288 Major Modification

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

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

<b>SB 288 Major Modification Thresholds (Existing Major Source)</b>			
<b>Pollutant</b>	<b>Project PE (lb/year)</b>	<b>Threshold (lb/year)</b>	<b>Major Modification?</b>
VOC	440	50,000	No

### 8. Federal Major Modification

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

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

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

<b>Significant Threshold (lb/year)</b>	
<b>Pollutant</b>	<b>Threshold (lb/year)</b>
VOC	0

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

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

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

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

Since this is a new unit, BAE for this unit is zero and,

$$NEI_N = PE_{2N}$$

where PE<sub>2N</sub> is the Post Project Potential to Emit for the new emissions units.

$$NEI_N = PE_{2N} = 440 \text{ lb-VOC/year}$$

The NEI for this project is thus calculated as follows:

$$NEI = NEI_N$$

$$NEI = 440 \text{ lb-VOC/year}$$

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

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

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

**I. Project Emissions Increase - New Major Source Determination**

The post-project potentials to emit from all new and modified units are compared to the PSD major source thresholds to determine if the project constitutes a new major source subject to PSD requirements.

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

<b>PSD Major Source Determination: Potential to Emit (tons/year)</b>						
	NO2	VOC	SO2	CO	PM	PM10
Total PE from New and Modified Units	0	0.2	0	0	0	0
PSD Major Source threshold	250	250	250	250	250	250
New PSD Major Source?	N	N	N	N	N	N

As shown in the table above, the potential to emit for the project, by itself, does not exceed any PSD major source threshold. Therefore Rule 2410 is not applicable and no further analysis is required.

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

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

## 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 a new distilled spirits and spirits additive storage tank with a PE greater than 2 lb/day for VOC. Thus BACT is triggered for VOC for this emissions unit.



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

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

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

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

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

As discussed in VII.C.8 above, this project constitutes a Federal Major Modification for VOC emissions. Therefore BACT is triggered for VOC emissions.

**2. BACT Guideline**

BACT Guideline 5.4.15, applies to the distilled spirits storage tanks. [Distilled Spirits Storage Tanks]. (Appendix B)

**3. Top-Down BACT Analysis**

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

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

VOC: Insulated tank, pressure/vacuum valve set within 10% of the maximum allowable working pressure of the tank, "gas tight" tank operation.

**B. Offsets**

**1. Offset Applicability**

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

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

## 2. Quantity of Offsets Required

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

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

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

Where,

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

BE = Baseline Emissions, (lb/year)

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

DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = Pre-project Potential to Emit for:

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

otherwise,

BE = Historic Actual Emissions (HAE)

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

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

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

Offsets Required for Storage				
Tank Model (ATCs)	PE2 (lb-VOC/yr)	Annual BE (lb-VOC/yr)	DOR	Offsets Required (lb-VOC/yr)
N-3386-505-0	440	0	1.5	660

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

Quarterly offsets required (lb/qtr) =  $(\text{Annual Offsets lb-VOC/year}) \div (4 \text{ quarters/year})$

Quarterly Offset Requirements - VOCs				
ATC	1 <sup>st</sup> Qtr (lb/qtr)	2 <sup>nd</sup> Qtr (lb/qtr)	3 <sup>rd</sup> Qtr (lb/qtr)	4 <sup>th</sup> Qtr (lb/qtr)
N-3386-505-0	165	165	165	165

The applicant has stated that the facility plans to use ERC certificate S-4636-1 to offset the increases in VOC emissions associated with this project. The above certificate has available quarterly VOC credits as follows:

	<u>1<sup>st</sup> Quarter</u>	<u>2<sup>nd</sup> Quarter</u>	<u>3<sup>rd</sup> Quarter</u>	<u>4<sup>th</sup> Quarter</u>
ERC #S-4636-1	50,000	50,000	50,000	50,000

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

**Proposed Rule 2201 (offset) Conditions:**

- ERC Certificate Number S-4636-1 (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]
- {GC# 4447 - edited} Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 165 lb, 2nd quarter - 165 lb, 3rd quarter - 165 lb, and fourth quarter - 165 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.
- e. Any project which results in a Title V significant permit modification

**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.8, this project is a Federal Major Modification for VOC; therefore, public noticing for Federal Major Modification purposes is required.

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

Applications which include a new emissions unit with a PE greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. As seen in Section VII.C.2 above, this project does not include a new emissions unit which has daily emissions greater than 100 lb/day for any pollutant; therefore public noticing for PE > 100 lb/day purposes is not required.

**c. Offset Threshold**

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

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

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

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

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

Stationary Source Increase in Permitted Emissions [SSIPE] – Public Notice					
Pollutant	ΣPE2 (lb/year)	ΣPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
VOC	440	0	440	20,000 lb/year	No

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

**e. Title V Significant Permit Modification**

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

**2. Public Notice Action**

As discussed above, public noticing is required for this project for Federal Major Modification. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and 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)**

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

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

**Proposed Rule 2201 (DEL) Conditions:**

- The nominal tank dimensions are 11.00 feet in diameter and 20 feet in height with a proposed volume of 15,000 gallons. The permittee shall submit to the District the gauge volume of the tank within 30 days of the actual tank capacity measurement. [District Rule 2201]
- The ethanol content of liquid stored in this tank shall not exceed 98.0 percent by volume. [District Rule 2201]
- The maximum storage throughput in this tank shall not exceed 32,258 gallons per day. [District Rule 2201]
- The maximum storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 1,000,000 gallons per year (equivalent to 440 lb-VOC/year). [District Rule 2201]

- This tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rule 2201]
- The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rule 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. The following conditions will be placed on the permits:

- 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/spirits 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 and 2201]

### **4. Reporting**

No reporting is required to demonstrate compliance with Rule 2201.

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

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

## **G. Compliance Certification**

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

## **H. Alternative Siting Analysis**

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

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

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

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

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

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

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

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

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

result, the proposed project constitutes a Significant Modification to the Title V Permit pursuant to Section 3.29.

As discussed above, the facility has applied for a Certificate of Conformity (COC); therefore, the facility must apply to modify their Title V permit with a minor modification, 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/spirits 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/spirits 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.



### **Rule 4623 Storage of Organic Liquids**

The purpose of this rule is to limit volatile organic compound (VOC) emissions from the storage of organic liquids. This rule applies to any tank with a capacity of 1,100 gallons or greater in which any organic liquid is placed, held, or stored.

However, Section 4.1.4 provides an exemption for tanks used to store fermentation products, byproducts or spirits. The tank in this project is a storage tank used to store distilled spirits. Therefore, the requirements of this rule are not applicable to this project.

### **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 any winery fermenting wine and/or storing wine in bulk containers.

The storage tank in this project stores distilled spirits and spirits additive. Therefore, the requirements of this rule are not applicable to this project.

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

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

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

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

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

### **Greenhouse Gas (GHG) Significance Determination**

It is determined that no other agency has or will prepare an environmental review document for the project. Thus the District is the Lead Agency for this project. The District's engineering evaluation (this document) demonstrates that the project would

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

### District CEQA Findings

The District performed an Engineering Evaluation (this document) for the proposed project and determined that the project will occur at an existing facility and the project involves negligible or no expansion of the existing use. Furthermore, the District determined that the project will not have a significant effect on the environment. The District finds that the project is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline §15301 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

### IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue Authority to Construct N-3386-505-0 subject to the permit conditions on the attached draft Authority to Construct in Appendix E.

### X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
N-3386-505-0	3020-05-B	15,000 gallons	\$98.00

### XI. Appendices

- A: Tanks 4.0 Calculations
- B: BACT Guideline and Top Down BACT Analysis
- C: Compliance Certification
- D: QNEC Calculations
- E: Draft ATC

# **Appendix A**

## **Tanks 4.0 Calculations**

N-3386			Output from Tank 4.0 total emissions no speciation			
% by Volume Alcohol	Average Ya	AMW Average	Total Pound of Emissions per Month	Total Pound of Emissions per Year	Alcohol Emissions in pounds (Max Daily)	Alcohol Emissions in pounds (Max Annual)
98.0%	0.9345	44.19	746.83	452.2	23.5	440

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

**Identification**

User Identification: N-3386-505-0 Daily  
 City: Stockton  
 State: California  
 Company: E&J Gallo  
 Type of Tank: Vertical Fixed Roof Tank  
 Description: Spirit/Wine storage tank

**Tank Dimensions**

Shell Height (ft): 20.00  
 Diameter (ft): 11.67  
 Liquid Height (ft) : 20.00  
 Avg. Liquid Height (ft): 20.00  
 Volume (gallons): 15,000.00  
 Turnovers: 66.67  
 Net Throughput(gal/yr): 1,000,000.00  
 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) 2.00  
 Radius (ft) (Dome Roof) 11.67

**Breather Vent Settings**

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

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

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

**N-3386-505-0 Daily - Vertical Fixed Roof Tank**  
**Stockton, California**

Mixture/Component	Month	Daily Liquid Surf Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.	Max.		Avg.	Min.	Max.					
Wine 98.0 % Vol Alcohol	Jul	77.30	77.30	77.30	77.30	1.1511	1.1511	1.1511	44.1870			43.85	Option 1: VP70 = .90826 VP80 = 1.24097

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

**N-3386-505-0 Daily - Vertical Fixed Roof Tank  
Stockton, California**

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):							0.0000					
Vapor Space Volume (cu ft):							111.1513					
Vapor Density (lb/cu ft):							0.0088					
Vapor Space Expansion Factor:							0.0000					
Vented Vapor Saturation Factor:							0.9404					
Tank Vapor Space Volume:							111.1513					
Vapor Space Volume (cu ft):							11.6700					
Tank Diameter (ft):							1.0392					
Vapor Space Outage (ft):							20.0000					
Tank Shell Height (ft):							20.0000					
Average Liquid Height (ft):							1.0392					
Roof Outage (ft):												
Roof Outage (Dome Roof)							1.0392					
Roof Outage (ft):							11.6700					
Dome Radius (ft):							5.8350					
Shell Radius (ft):												
Vapor Density							0.0088					
Vapor Density (lb/cu ft):							44.1870					
Vapor Molecular Weight (lb/lb-mole)							1.1511					
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):							536.9700					
Daily Avg. Liquid Surface Temp. (deg. R):							77.6500					
Daily Average Ambient Temp. (deg. F):												
Ideal Gas Constant R (psia cu ft / (lb-mol-deg R)):							10.731					
Liquid Bulk Temperature (deg. R):							536.9700					
Tank Paint Solar Absorptance (Shell):							0.1700					
Tank Paint Solar Absorptance (Roof):							0.1700					
Daily Total Solar Insolation Factor (Btu/sq ft day):							2,688.0000					
Vapor Space Expansion Factor							0.0000					
Vapor Space Expansion Factor:							0.0000					
Daily Vapor Temperature Range (deg. R):							0.0000					
Daily Vapor Pressure Range (psia):							0.0000					
Breather Vent Press. Setting Range (psia):							0.0000					
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):							1.1511					
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):							1.1511					
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):							1.1511					
Daily Avg. Liquid Surface Temp. (deg R):							536.9700					
Daily Min. Liquid Surface Temp. (deg R):							536.9700					
Daily Max. Liquid Surface Temp. (deg R):							536.9700					
Daily Ambient Temp. Range (deg. R):							33.5000					
Vented Vapor Saturation Factor							0.9404					
Vented Vapor Saturation Factor:							1.1511					
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):							1.0392					
Vapor Space Outage (ft):												
Working Losses (lb):							746.8320					

Vapor Molecular Weight (lb/lb-mole):	44.1870
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	1.1511
Net Throughput (gal/mo.):	1,000,000.0000
Annual Turnovers:	66.6667
Turnover Factor:	0.6167
Maximum Liquid Volume (gal):	15,000.0000
Maximum Liquid Height (ft):	20.0000
Tank Diameter (ft):	11.6700
Working Loss Product Factor:	1.0000
Total Losses (lb):	746.8320



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

**Emissions Report for: July**

**N-3386-505-0 Daily - Vertical Fixed Roof Tank  
Stockton, California**

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Wine 98.0 % Vol Alcohol	746.83	0.00	746.83

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

**Identification**

User Identification:	N-3386-505-0 Annual
City:	Stockton
State:	California
Company:	E&J Gallo
Type of Tank:	Vertical Fixed Roof Tank
Description:	Spirit/Wine storage tank

**Tank Dimensions**

Shell Height (ft):	20.00
Diameter (ft):	11.67
Liquid Height (ft) :	20.00
Avg. Liquid Height (ft):	20.00
Volume (gallons):	15,000.00
Turnovers:	66.67
Net Throughput(gal/yr):	1,000,000.00
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)	2.00
Radius (ft) (Dome Roof)	11.67

**Breather Vent Settings**

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

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

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

**N-3386-505-0 Annual - Vertical Fixed Roof Tank  
Stockton, California**

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.	Max.		Avg.	Min.	Max.					
Wine 98.0 % Vol Alcohol	Jan	61.60	61.60	61.60	61.60	0.6970	0.6970	0.6970	44.1870			43.85	Option 1: VP60 = .65673 VP70 = .90826
Wine 98.0 % Vol Alcohol	Feb	61.60	61.60	61.60	61.60	0.6970	0.6970	0.6970	44.1870			43.85	Option 1: VP60 = .65673 VP70 = .90826
Wine 98.0 % Vol Alcohol	Mar	61.60	61.60	61.60	61.60	0.6970	0.6970	0.6970	44.1870			43.85	Option 1: VP60 = .65673 VP70 = .90826
Wine 98.0 % Vol Alcohol	Apr	61.60	61.60	61.60	61.60	0.6970	0.6970	0.6970	44.1870			43.85	Option 1: VP60 = .65673 VP70 = .90826
Wine 98.0 % Vol Alcohol	May	61.60	61.60	61.60	61.60	0.6970	0.6970	0.6970	44.1870			43.85	Option 1: VP60 = .65673 VP70 = .90826
Wine 98.0 % Vol Alcohol	Jun	61.60	61.60	61.60	61.60	0.6970	0.6970	0.6970	44.1870			43.85	Option 1: VP60 = .65673 VP70 = .90826
Wine 98.0 % Vol Alcohol	Jul	61.60	61.60	61.60	61.60	0.6970	0.6970	0.6970	44.1870			43.85	Option 1: VP60 = .65673 VP70 = .90826
Wine 98.0 % Vol Alcohol	Aug	61.60	61.60	61.60	61.60	0.6970	0.6970	0.6970	44.1870			43.85	Option 1: VP60 = .65673 VP70 = .90826
Wine 98.0 % Vol Alcohol	Sep	61.60	61.60	61.60	61.60	0.6970	0.6970	0.6970	44.1870			43.85	Option 1: VP60 = .65673 VP70 = .90826
Wine 98.0 % Vol Alcohol	Oct	61.60	61.60	61.60	61.60	0.6970	0.6970	0.6970	44.1870			43.85	Option 1: VP60 = .65673 VP70 = .90826
Wine 98.0 % Vol Alcohol	Nov	61.60	61.60	61.60	61.60	0.6970	0.6970	0.6970	44.1870			43.85	Option 1: VP60 = .65673 VP70 = .90826
Wine 98.0 % Vol Alcohol	Dec	61.60	61.60	61.60	61.60	0.6970	0.6970	0.6970	44.1870			43.85	Option 1: VP60 = .65673 VP70 = .90826

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

**N-3386-505-0 Annual - Vertical Fixed Roof Tank**  
**Stockton, 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):	111.1513	111.1513	111.1513	111.1513	111.1513	111.1513	111.1513	111.1513	111.1513	111.1513	111.1513	111.1513
Vapor Density (lb/cu ft):	0.0055	0.0055	0.0055	0.0055	0.0055	0.0055	0.0055	0.0055	0.0055	0.0055	0.0055	0.0055
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:	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630
Tank Vapor Space Volume:												
Vapor Space Volume (cu ft):	111.1513	111.1513	111.1513	111.1513	111.1513	111.1513	111.1513	111.1513	111.1513	111.1513	111.1513	111.1513
Tank Diameter (ft):	11.6700	11.6700	11.6700	11.6700	11.6700	11.6700	11.6700	11.6700	11.6700	11.6700	11.6700	11.6700
Vapor Space Outage (ft):	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392
Tank Shell Height (ft):	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000
Average Liquid Height (ft):	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000
Roof Outage (ft):	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392
Roof Outage (Dome Roof):												
Roof Outage (ft):	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392
Dome Radius (ft):	11.6700	11.6700	11.6700	11.6700	11.6700	11.6700	11.6700	11.6700	11.6700	11.6700	11.6700	11.6700
Shell Radius (ft):	5.8350	5.8350	5.8350	5.8350	5.8350	5.8350	5.8350	5.8350	5.8350	5.8350	5.8350	5.8350
Vapor Density:												
Vapor Density (lb/cu ft):	0.0055	0.0055	0.0055	0.0055	0.0055	0.0055	0.0055	0.0055	0.0055	0.0055	0.0055	0.0055
Vapor Molecular Weight (lb/lb-mole):	44.1870	44.1870	44.1870	44.1870	44.1870	44.1870	44.1870	44.1870	44.1870	44.1870	44.1870	44.1870
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970
Daily Avg Liquid Surface Temp. (deg. R):	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700
Daily Average Ambient Temp. (deg. F):	45.0000	50.5000	54.0500	59.3000	66.7000	73.3000	77.6500	76.8000	72.7000	64.5500	53.0500	44.9500
Ideal Gas Constant R (psia cu ft / (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):	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700
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 Insolation Factor (Btu/sqft day):	597.0000	939.0000	1,458.0000	2,004.0000	2,435.0000	2,684.0000	2,688.0000	2,368.0000	1,907.0000	1,315.0000	782.0000	538.0000
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):	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970
Daily Avg Liquid Surface Temp. (deg R):	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700
Daily Min. Liquid Surface Temp. (deg R):	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700
Daily Max. Liquid Surface Temp. (deg R):	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700	521.2700
Daily Ambient Temp. Range (deg. R):	16.0000	20.4000	22.9000	27.2000	29.8000	31.6000	33.5000	32.2000	30.4000	27.5000	20.7000	15.7000
Vented Vapor Saturation Factor:												
Vented Vapor Saturation Factor:	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970
Vapor Space Outage (ft):	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392
Working Losses (lb):	37.6818	37.6818	37.6818	37.6818	37.6818	37.6818	37.6818	37.6818	37.6818	37.6818	37.6818	37.6818

Vapor Molecular Weight (lb/lb-mole):	44.1870	44.1870	44.1870	44.1870	44.1870	44.1870	44.1870	44.1870	44.1870	44.1870	44.1870	44.1870
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970	0.6970
Net Throughput (gal/mo.):	83,333.3333	83,333.3333	83,333.3333	83,333.3333	83,333.3333	83,333.3333	83,333.3333	83,333.3333	83,333.3333	83,333.3333	83,333.3333	83,333.3333
Annual Turnovers:	66.6667	66.6667	66.6667	66.6667	66.6667	66.6667	66.6667	66.6667	66.6667	66.6667	66.6667	66.6667
Turnover Factor:	0.6167	0.6167	0.6167	0.6167	0.6167	0.6167	0.6167	0.6167	0.6167	0.6167	0.6167	0.6167
Maximum Liquid Volume (gal):	15,000.0000	15,000.0000	15,000.0000	15,000.0000	15,000.0000	15,000.0000	15,000.0000	15,000.0000	15,000.0000	15,000.0000	15,000.0000	15,000.0000
Maximum Liquid Height (ft):	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000
Tank Diameter (ft):	11.6700	11.6700	11.6700	11.6700	11.6700	11.6700	11.6700	11.6700	11.6700	11.6700	11.6700	11.6700
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
<b>Total Losses (lb):</b>	<b>37.6818</b>	<b>37.6818</b>	<b>37.6818</b>	<b>37.6818</b>	<b>37.6818</b>	<b>37.6818</b>	<b>37.6818</b>	<b>37.6818</b>	<b>37.6818</b>	<b>37.6818</b>	<b>37.6818</b>	<b>37.6818</b>

**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**

**N-3386-505-0 Annual - Vertical Fixed Roof Tank  
Stockton, California**

Components	Losses(lbs)		
	Working Loss	Breathing Loss	Total Emissions
Wine 98.0 % Vol Alcohol	452.18	0.00	452.18

## **Appendix B**

### **BACT Guideline and Top Down BACT Analysis**

San Joaquin Valley  
Unified Air Pollution Control District

**Best Available Control Technology (BACT) Guideline 5.4.15\***

Last Update: 11/2/2011

**Distilled Spirits Storage Tank**

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Insulation or Equivalent**, Pressure Vacuum Relief Valve (PVRV) set within 10% of the maximum allowable working pressure of the tank; "gas-tight" tank operation	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 adsorption or equivalent (90% control); 4) Refrigerated Storage (70% control)	

\*\* Tank 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.

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

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



# Top Down BACT Analysis for Distilled Spirits Storage VOC Emissions

## Step 1 - Identify All Possible Control Technologies

The SJVUAPCD BACT Clearinghouse guideline 5.4.15, identifies achieved in practice BACT for distilled spirits 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.

*\*\*Tanks 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.*

The SJVUAPCD BACT Clearinghouse guideline 5.4.15, identifies technologically feasible BACT for distilled spirits storage tanks as follows:

- 2) Refrigerated storage (70% control)
- 3) Capture of VOCs and absorption or equivalent (90% control)
- 4) Capture of VOCs and carbon adsorption or equivalent (95% control)
- 5) Capture of VOCs and thermal or catalytic oxidation or equivalent (98% 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 refrigerated storage	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.	Baseline (Achieved-in-Practice)

#### **Step 4 - Cost Effectiveness Analysis**

A cost-effective analysis is performed for control technologies which is more effective than meeting the requirements of option 1 (achieved-in-practice BACT), as proposed by the facility.

##### Collection System Capital Investment (based on ductwork):

A common feature of all technically feasible options is that they require installation of a collection system for delivering the VOCs from the tanks to the common control device.

The following cost information was provided by the facility, and the bases of the cost information include:

- The costs for the ductwork and the required clean-in-place system are based on information from the 2005 Eichleay Study. The 2005 Eichleay Study was used in development of District Rule 4694 *Wine Fermentation and Storage Tanks* and includes substantial information on the costs and details of the potential application of VOC controls to wineries and addresses many of the technical issues of the general site specific factors for wineries.
- The collection system consists of stainless steel place ductwork (stainless steel is required due to food grade product status) with isolation valving, connecting the tank 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 to provide adequate strength for spanning between supports.
- One of the major concerns of a manifold duct system is microorganisms spoiling the product. It is necessary to design into the system a positive disconnect of the ducting system when the tank is not being filled. There are a number of ways this can be done. In this case, an automatic butterfly valve with a physical spool to disconnect the tank from the duct will be utilized.

Per applicant, the overall estimated capital investment for the ductwork, knockout drum, and ducting isolation components is \$34,000 for this common collection system. See detail ductwork layout and cost breakdown in Attachment I.

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

## **Capture of VOCs with Thermal or Catalytic Oxidation/ Carbon Adsorption/Absorption or Condensation (Options 1, 2, 3, and 4)**

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

Option 1 is capable of a 98% reduction in VOC emissions while the remaining options under consideration have lesser control efficiencies. Showing that all of the options under consideration are not cost effective at a 98% reduction level based on capital investment requirements of ductwork and steel alone is adequate since options other than thermal/catalytic oxidation would be even less cost effective at their actual (lower) reduction levels.

$$\begin{aligned}\text{Annual Emission Reduction} &= \text{Uncontrolled Emissions} \times 0.98 \\ &= 440 \text{ lb-VOC/year} \times 0.98 \times \text{ton}/2,000 \text{ lb} \\ &= 0.22 \text{ tons-VOC/year}\end{aligned}$$

$$\begin{aligned}\text{Cost Effectiveness} &= \$14,568/\text{year} \div 0.22 \text{ tons-VOC/year} \\ &= \$66,218/\text{ton-VOC}\end{aligned}$$

As shown above, the cost of VOC reduction by capture of VOCs with thermal or catalytic oxidation, carbon adsorption, absorption or condensation would be greater than the \$17,500/ton cost effectiveness threshold for VOC in the District BACT policy, based solely on the direct cost required for the collection ducting. As stated above, including any additional cost, which would be expected for any fully operational control system, would only make the control system less cost effective. Therefore these options are not cost-effective and will not be considered for this project.

### **Step 5 - Select BACT**

All identified feasible options with control efficiencies higher than the option proposed by the facility have been shown to not be cost effective. The facility has proposed Option 1, insulated tank, pressure/vacuum valve set within 10% of the maximum allowable working pressure of the tank, "gas tight" tank operation. These BACT requirements will be placed on the ATC as enforceable conditions.

# **Attachment I**

Alcohol Tanks

Main Duct Routing

Tank height in feet	Distance from floor to duct in feet	Piping length down the side of tank
20	10	10



It is assumed the emission controls and the CIP equipment can be located far enough from tank WSA 1 to reduce the need for explosion proof electrical equipment, and modify other considerations that are needed to handle an explosive compound. Reduce does not mean completely eliminate. The safety considerations needed for this project can not be determined until a through safety review is completed.

For example the electrical classification may be changed from Class I to Class II to reduce cost by keep the CIP and emission control equipment at some distance from the tank.

It is assume than due to the alcohol concentration of 98% that an allowance of \$20,000 is sufficient to take care of these issues. This cost can be further refined when the surrounding environment for this project is completely reviewed.

The \$20,000 is included in the duct costing file.

From	To	Main Duct	Gas Flow CFM	Duct Length Feet	Design Duct Velocity from Eickley feet/second	Nominal Duct Size diameter in	Standard Size of pipe	Number of Tanks to Connect	Total feet	Cost Per Foot from Eickley	Cost	Comments
Tank Farm Nominal Size 15,000	From Tank Center	Main Duct	6.6	40.83	40	0.71	6.00	1	40.83	\$61.00	\$2,490.63	Connections from Tank to Main Duct

Eickley's value for a knock duct drum was \$46,300. Because this tank is small the drum is estimated to be about a 1000 gallon. A budget of \$5,000 is used. The ducting is sized at 6 inch which is the smallest we have pricing. A 3 inch would be acceptable. As a result the ducting pipe pricing is reduced by 50%. We have reduced the duct spools and connection valve by the same amount. The 50% was chosen based on the ratio of the surface area of a 3 inch duct to a 6 inch duct. This reduces the amount of material and the linear length of weld to be run by about 50%.

Adjusted for 3 inch ducting

Tank Ducting SS Tubing	\$1,245
Knock Out Drum	\$5,000
Structural Support Allowance	\$6,800
Butterfly valves at duct connection to tank	\$1,053
1 foot removable spool	\$150
Allowance for Explosion Safety Concerns	\$20,000
<b>Outling cost</b>	<b>\$34,000</b>

1) One of the major concerns of a manifold duct system is inadvertently transferring fluid from one tank to another.

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

3) It should be noticed our that no design work has been done and this should be considered a conceptual estimate.

4) It should be noted that there is only one tank in this project, but we added the spooling to provide for future tanks.

It is assumed the emission controls and the CIP equipment can be located far enough from tank WSA 1 to reduce the need for explosion proof electrical equipment, and modify other considerations that are needed to handle an explosive compound. Reduce does not mean completely eliminate. The safety considerations needed for this project can not be determined until a through safety review is completed.

For example, the electrical classification may be changed from Class I to Class II to reduce cost by keep the CIP and emission control equipment at some distance from the tank.

It is assumed that due to the alcohol concentration of 98% that an allowance of \$20,000 is sufficient to take care of these issues. This cost can be further refined when the surrounding environment for this project is completely reviewed.

The \$20,000 is included in the duct costing file.

**Appendix C**  
**Compliance Certification**

**San Joaquin Valley  
Unified Air Pollution Control District**

**TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM**

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

- SIGNIFICANT PERMIT MODIFICATION                       ADMINISTRATIVE  
 MINOR PERMIT MODIFICATION     AMENDMENT

COMPANY NAME: E&J Gallo Winery	FACILITY ID: N- 3386
1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: E&J Gallo Winery	
3. Agent to the Owner: Christine Ryan	

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

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

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

William Stewart  
 Signature of Responsible Official

10/2/2015  
 Date

William Stewart  
 Name of Responsible Official (please print)

Vice President of Operations  
 Title of Responsible Official (please print)



## **Appendix D**

### **Quarterly Net Emissions Change (QNEC)**

## 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.

Using the values in Sections VII.C.2 and VII.C.6 in the evaluation above, quarterly PE2 and quarterly PE1 can be calculated as follows:

$$\begin{aligned} PE2_{\text{quarterly}} &= PE2_{\text{annual}} \div 4 \text{ quarters/year} \\ &= 440 \text{ lb/year} \div 4 \text{ qtr/year} \\ &= 110 \text{ lb-VOC/qtr} \end{aligned}$$

$$\begin{aligned} PE1_{\text{quarterly}} &= PE1_{\text{annual}} \div 4 \text{ quarters/year} \\ &= 0 \text{ lb/year} \div 4 \text{ qtr/year} \\ &= 0 \text{ lb-VOC/qtr} \end{aligned}$$

Quarterly NEC [QNEC]			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
VOC	110	0	110

**Appendix E**

**Draft ATC**

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

PERMIT NO: N-3386-505-0

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY  
MAILING ADDRESS: 600 YOSEMITE BLVD  
MODESTO, CA 95354

LOCATION: 600 YOSEMITE BLVD  
MODESTO, CA 95354

**EQUIPMENT DESCRIPTION:**

15,000 GALLON (NOMINAL) INSULATED STAINLESS STEEL DISTILLED SPIRITS AND SPIRITS ADDITIVE STORAGE TANK (TANK WSA1) WITH PRESSURE/VACUUM VALVE AND INSULATION

**CONDITIONS**

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 165 lb, 2nd quarter - 165 lb, 3rd quarter - 165 lb, and fourth quarter - 165 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Number S-4636-1 (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. The nominal tank dimensions are 11.00 feet in diameter and 20 feet in height with a proposed volume of 15,000 gallons. The permittee shall submit to the District the gauge volume of the tank within 30 days of the actual tank capacity measurement. [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

**DRAFT**

Arnaud Marjolle, Director of Permit Services  
N-3386-505-0 Feb 8 2016 9 58AM - GARCIAJ 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 Rule 2201] 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 Rule 2201] Federally Enforceable Through Title V Permit
9. The ethanol content of liquid stored in this tank shall not exceed 98.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The maximum storage throughput in this tank shall not exceed 32,258 gallons per day [District Rule 2201] Federally Enforceable Through Title V Permit
11. The maximum storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 1,000,000 gallons per year (equivalent to 440 lb-VOC/year). [District Rule 2201] Federally Enforceable Through Title V Permit
12. 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/spirits transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
13. The operator shall maintain records of the calculated 12 month rolling storage throughput rate (gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
14. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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