San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

MAY 2 4 2016

Mr. Neil McDougald
E & J Gallo Winery
5610 E Olive Ave
Fresno, CA 93727

Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # C-447
Project # C-1160219

Dear Mr. McDougald:

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 to the use of an insulated stainless steel tank (Weigand Tank) to store decanter material.

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

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San Joaquin Valley Air Pollution Control District
Authority to Construct Application Review
Decanter Material (Ethanol Laden Liquid) Storage Tank

Facility Name:	E & J Gallo Winery	Date:	May 9, 2016
Mailing Address:	5610 E. Olive Avenue	Engineer:	Jesse A. Garcia
	Fresno, CA 93727	Lead Engineer:	Joven Refuerzo
Contact Person:	Kim Burns		
Telephone:	(559) 458-2457		
Email:	Kim.burns@ejgallo.com		
Application #(s):	C447-342-0		
Project #:	C-1160219		
Deemed Complete:	March 3, 2016		

I. Proposal

E & J Gallo Winery has requested an Authority to Construct (ATC) permit for the use of an insulated stainless steel tank (Weigand Tank) to store decanter material which is an ethanol laden liquid.

The applicant submitted a revised application dated April 5, 2016 and received by the District on April 12, 2016 to increase the throughput from the originally proposed amounts of 16,800 gallons/day and 2,856,000 gallons/year to 27,500 gallons/day and 4,125,000 gallons/year.

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 (2/18/16)
Rule 2410	Prevention of Significant Deterioration (6/16/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99)
Rule 4002	National Emissions Standards for Hazardous Air Pollutants (5/20/04)
Rule 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 5610 E. Olive Ave in Fresno, CA. The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

E & J Gallo Winery produces red and white wines and distilled alcoholic beverages which are stored and processed in storage tanks. This tank may hold decanter material which is liquid that is removed from the tail end of the distillation process; the liquid does not meet the quality standards that are required/desired of the final distilled spirits product. Decanter material is removed from the distillation process and is decanted and then returned to the beginning of the distillation process to be processed again.

Since the nature of the distillation process is to heat up the ethanol laden liquid to obtain a desired product, this decanter material is 120° F or less. Also, due to the decanter material being stored for a short period of time (approximately 3 days), the liquid does not reach ambient temperature.

V. Equipment Listing

C-447-342-0: 12,000 GALLON INSULATED STAINLESS STEEL DECANTER MATERIAL STORAGE TANK (WEIGAND TANK) WITH PRESSURE/VACUUM VALVE AND INSULATION

VI. Emission Control Technology Evaluation

VOCs (ethanol) are emitted from decanter material 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

- VOC is the only pollutant of concern emitted in this project.
- The proposed tank will only be used for decanter material storage with a maximum ethanol content 15%.

- Typically, for enclosed tanks with refrigeration and/or insulation (or equivalent) and P/V valves, breathing losses from storage ethanol laden liquids are assumed to be negligible.
- Maximum daily and annual liquid storage temperature = 120° F. (per applicant)
- Since the decanter material is stored for a short period of time, the applicant proposes to assume that the liquid will be stored at 120° F continuously as a worst case.
- Maximum storage throughput as proposed by applicant:

Tank	Daily Storage (gal/day)	Annual Storage (gal/year)
C-447-342-0	27,500	4,125,000

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)

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)
C-447-342-0	16.4	1,062

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:

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

PSD Major Source Determination (tons/year)		
	VOC	Source
Estimated Facility PE before Project Increase	194,868	C-1080226 (In-House PTOs for Existing Tanks)
PSD Major Source Thresholds	250	- -
PSD Major Source ? (Y/N)	Y	- -

As shown above, the facility is an existing PSD major source for at least one pollutant.

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 concededs 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.

SB 288 Major Modification Thresholds (Existing Major Source)			
Pollutant	Project PE (lb/year)	Threshold (lb/year)	Major Modification?
VOC	1,062	50,000	No

8. Federal Major Modification

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

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

- To determine the post-project projected actual emissions from existing units, the provisions of 40 CFR 51.165 (a)(1)(xxviii) shall be used.

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

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

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

Net Emission Increase for New Units (NEI_N)

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

$NEI_N = PE2_N - BAE$

Since the proposed tank is a new unit, BAE for this unit is zero and,

$NEI_N = PE2_N$

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

$NEI_N = PE2_N = 1{,}062$ lb-VOC/year

The NEI for this project is thus calculated as follows:

$NEI = NEI_N$
NEI = 1,062 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.

Federal Offset Quantities:

The Federal offset quantity is only calculated only for the pollutants for which the project is a Federal Major Modification. The Federal offset quantity is the sum of the annual emission changes for all new and modified emission units in a project calculated as the

potential to emit after the modification (PE2) minus the actual emissions (AE) during the baseline period for each emission unit times the applicable federal offset ratio. There are no special calculations performed for units covered by an SLC.

VOC		Federal Offset Ratio	1.5
Permit No.	**Actual Emissions (lb/year)**	**Potential Emissions (lb/year)**	**Emissions Change (lb/yr)**
C-447-342-0	0	1,062	1,062
		Net Emission Change (lb/year):	1,062
		Federal Offset Quantity: (NEC * 1.5)	1,593

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)

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

I. Project Location Relative to Class 1 Area

As demonstrated in the "PSD Major Source Determination" Section above, the facility was determined to be a existing PSD Major Source. Because the project is not located within 10 km (6.2 miles) of a Class 1 area – modeling of the emission increase is not required to determine if the project is subject to the requirements of Rule 2410.

II. Project Emission Increase – Significance Determination

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

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

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

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

10. Quarterly Net Emissions Change (QNEC)

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

Although the decanter material is not referred to as distilled spirits by the applicant (and in this evaluation) because it is not a finished product and has been rejected for quality standards, the decanter material has been distilled and is therefore, technically a distilled spirit.

BACT Guideline 5.4.15, applies to the decanter material storage tank. [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) = (Σ[PE2 – BE] + ICCE) x DOR, for all new or modified emissions units in the project,

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

BE = Pre-project Potential to Emit for:

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

otherwise,

BE = Historic Actual Emissions (HAE)

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

Offsets Required (lb/year) = Σ[PE2 – BE] x DOR

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)
C-447-342-0	1,062	0	1.5	1,593

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

Quarterly offsets required (lb/qtr) = (Annual Offsets lb-VOC/year) ÷ (4 quarters/year)

Quarterly Offset Requirements - VOCs				
ATC	1st Qtr (lb/qtr)	2nd Qtr (lb/qtr)	3rd Qtr (lb/qtr)	4th Qtr (lb/qtr)
C-447-342-0	398	398	398	399

The applicant has stated that the facility plans to use ERC certificate S-4664-1 to offset the increases in VOC emissions associated with this project. The above certificate has available quarterly VOC credits as follows:

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
ERC #S-4664-1	48,500	48,500	48,500	48,500

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

Proposed Rule 2201 (offset) Conditions:

- {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 - 398 lb, 2nd quarter - 398 lb, 3rd quarter - 398 lb, and fourth quarter - 399 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 2/18/16) for the ERC specified below. [District Rule 2201]

- ERC Certificate Number S-4664-1 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]

C. Public Notification

1. Applicability

Public noticing is required for:

a. New Major Sources, Federal Major Modifications, and SB288 Major Modifications,
b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
c. Any project which results in the offset thresholds being surpassed, and/or
d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.
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	1,062	0	1,062	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 ethanol content of liquid stored in this tank shall not exceed 15.0 percent by volume. [District Rule 2201]
- The maximum storage throughput in this tank shall not exceed 27,500 gallons per day. [District Rule 2201]
- The maximum storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 4,125,000 gallons per year (equivalent to 1,062 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 liquid 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 permitting an existing tank with no 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 an administrative amendment, prior to operating with the proposed modifications. Continued compliance with this rule is expected. The facility shall not implement the changes requested until the final permit is issued.

Rule 4001 New Source Performance Standards (NSPS)

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60. However, no subparts of 40 CFR Part 60 apply to wine/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 decanter material (which as described above is technically a distilled spirit). 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 C-447-342-0 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
C-447-342-0	3020-05-B	12,000 gallons	$98.00

XI. Appendices

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

Appendix A

Tanks 4.0 Calculations and Summary

N-447			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)
15.0%	0.3700	28.38	848.67	1770.56	16.4	1062

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

Identification		
User Identification:	C-447-342-0 Daily	
City:		
State:		
Company:		
Type of Tank:	Vertical Fixed Roof Tank	
Description:		
Tank Dimensions		
Shell Height (ft):		22.50
Diameter (ft):		10.00
Liquid Height (ft) :		21.00
Avg. Liquid Height (ft):		21.00
Volume (gallons):		12,000.00
Turnovers:		71.04
Net Throughput(gal/yr):		852,500.00
Is Tank Heated (y/n):	Y	
Paint Characteristics		
Shell Color/Shade:	White/White	
Shell Condition	Good	
Roof Color/Shade:	White/White	
Roof Condition:	Good	
Roof Characteristics		
Type:	Cone	
Height (ft)		0.00
Slope (ft/ft) (Cone Roof)		0.00
Breather Vent Settings		
Vacuum Settings (psig):		0.00
Pressure Settings (psig)		0.00

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

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

C-447-342-0 Daily - Vertical Fixed Roof Tank

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Decanter Material 15.0% Ethanol	Jul	120.00	120.00	120.00	120.00	2.5016	2.5016	2.5016	28.3788			19.46	

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

C-447-342-0 Daily - Vertical Fixed Roof Tank

Month	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb)							0.0000					
Vapor Space Volume (cu ft)							117.8097					
Vapor Density (lb/cu ft)							0.0114					
Vapor Space Expansion Factor							0.0000					
Vented Vapor Saturation Factor							0.8341					
Tank Vapor Space Volume												
Vapor Space Volume (cu ft)							117.8097					
Tank Diameter (ft)							10.0000					
Vapor Space Outage (ft)							1.5000					
Tank Shell Height (ft)							22.5000					
Average Liquid Height (ft)							21.0000					
Roof Outage (ft)							0.0000					
Roof Outage (Cone Roof)												
Roof Outage (ft)							0.0000					
Roof Height (ft)							0.0000					
Roof Slope (ft/ft)							0.0000					
Shell Radius (ft)							5.0000					
Vapor Density												
Vapor Density (lb/cu ft)							0.0114					
Vapor Molecular Weight (lb/lb-mole)							28.3788					
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)							2.5016					
Daily Avg. Liquid Surface Temp. (deg. R)							579.6700					
Daily Average Ambient Temp. (deg. F)							81.8500					
Ideal Gas Constant R (psia cuft / (lb-mol-deg R))							10.731					
Liquid Bulk Temperature (deg. R)							579.6700					
Tank Paint Solar Absorptance (Shell)							0.1700					
Tank Paint Solar Absorptance (Roof)							0.1700					
Daily Total Solar Insulation Factor (Btu/sqft day)							2,551.4853					
Vapor Space Expansion Factor												
Vapor Space Expansion Factor							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)							2.5016					
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia)							2.5016					
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia)							2.5016					
Daily Avg. Liquid Surface Temp. (deg R)							579.6700					
Daily Min. Liquid Surface Temp. (deg R)							579.6700					
Daily Max. Liquid Surface Temp. (deg R)							579.6700					
Daily Ambient Temp. Range (deg. R)							33.5000					
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor							0.8341					
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)							2.5016					
Vapor Space Outage (ft)							1.5000					
Working Losses (lb)							848.6691					
Vapor Molecular Weight (lb/lb-mole)							28.3788					
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)							2.5016					
Net Throughput (gal/mo.)							852,500.0000					
Annual Turnovers							71.0417					
Turnover Factor							0.5890					
Maximum Liquid Volume (gal)							12,000.0000					
Maximum Liquid Height (ft)							21.0000					
Tank Diameter (ft)							10.0000					
Working Loss Product Factor							1.0000					
Total Losses (lb)							848.6691					

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

Emissions Report for: July

C-447-342-0 Daily - Vertical Fixed Roof Tank

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Decanter Material 15.0% Ethanol	848.67	0.00	848.67

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

Identification

User Identification:	Tank P2
City:	Fresno
State:	California
Company:	E & J Gallo Winery
Type of Tank:	Vertical Fixed Roof Tank
Description:	Stainless steel, insulated, closed vessel with PRV Valve. Tank operates at 120 degree F at 15 % alcohol. A special data base point for the Tanks 4.0 was added to WI data base to calculate storage emissions.

Tank Dimensions

Shell Height (ft):		22.50
Diameter (ft):		10.00
Liquid Height (ft) :		21.00
Avg. Liquid Height (ft):		21.00
Volume (gallons):		12,000.00
Turnovers:		343.75
Net Throughput(gal/yr):		4,125,000.00
Is Tank Heated (y/n):	Y	

Paint Characteristics

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

Roof Characteristics

Type:	Cone	
Height (ft)		0.00
Slope (ft/ft) (Cone Roof)		0.00

Breather Vent Settings

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

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

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

Tank P2 - Vertical Fixed Roof Tank
Fresno, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Wine 15.0% - 120 Degree F	Jan	120.00	120.00	120.00	120.00	2.5016	2.5016	2.5016	28.3788			19.46	
Wine 15.0% - 120 Degree F	Feb	120.00	120.00	120.00	120.00	2.5016	2.5016	2.5016	28.3788			19.46	
Wine 15.0% - 120 Degree F	Mar	120.00	120.00	120.00	120.00	2.5016	2.5016	2.5016	28.3788			19.46	
Wine 15.0% - 120 Degree F	Apr	120.00	120.00	120.00	120.00	2.5016	2.5016	2.5016	28.3788			19.46	
Wine 15.0% - 120 Degree F	May	120.00	120.00	120.00	120.00	2.5016	2.5016	2.5016	28.3788			19.46	
Wine 15.0% - 120 Degree F	Jun	120.00	120.00	120.00	120.00	2.5016	2.5016	2.5016	28.3788			19.46	
Wine 15.0% - 120 Degree F	Jul	120.00	120.00	120.00	120.00	2.5016	2.5016	2.5016	28.3788			19.46	
Wine 15.0% - 120 Degree F	Aug	120.00	120.00	120.00	120.00	2.5016	2.5016	2.5016	28.3788			19.46	
Wine 15.0% - 120 Degree F	Sep	120.00	120.00	120.00	120.00	2.5016	2.5016	2.5016	28.3788			19.46	
Wine 15.0% - 120 Degree F	Oct	120.00	120.00	120.00	120.00	2.5016	2.5016	2.5016	28.3788			19.46	
Wine 15.0% - 120 Degree F	Nov	120.00	120.00	120.00	120.00	2.5016	2.5016	2.5016	28.3788			19.46	
Wine 15.0% - 120 Degree F	Dec	120.00	120.00	120.00	120.00	2.5016	2.5016	2.5016	28.3788			19.46	

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

Tank P2 - Vertical Fixed Roof Tank
Fresno, California

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vapor Space Volume (cu ft):	117.8097	117.8097	117.8097	117.8097	117.8097	117.8097	117.8097	117.8097	117.8097	117.8097	117.8097	117.8097
Vapor Density (lb/cu ft):	0.0114	0.0114	0.0114	0.0114	0.0114	0.0114	0.0114	0.0114	0.0114	0.0114	0.0114	0.0114
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:	0.8341	0.8341	0.8341	0.8341	0.8341	0.8341	0.8341	0.8341	0.8341	0.8341	0.8341	0.8341
Tank Vapor Space Volume:												
Vapor Space Volume (cu ft):	117.8097	117.8097	117.8097	117.8097	117.8097	117.8097	117.8097	117.8097	117.8097	117.8097	117.8097	117.8097
Tank Diameter (ft):	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000
Vapor Space Outage (ft):	1.5000	1.5000	1.5000	1.5000	1.5000	1.5000	1.5000	1.5000	1.5000	1.5000	1.5000	1.5000
Tank Shell Height (ft):	22.5000	22.5000	22.5000	22.5000	22.5000	22.5000	22.5000	22.5000	22.5000	22.5000	22.5000	22.5000
Average Liquid Height (ft):	21.0000	21.0000	21.0000	21.0000	21.0000	21.0000	21.0000	21.0000	21.0000	21.0000	21.0000	21.0000
Roof Outage (ft):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Roof Outage (Cone Roof)												
Roof Outage (ft):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Roof Height (ft):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Roof Slope (ft/ft):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Shell Radius (ft):	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000
Vapor Density												
Vapor Density (lb/cu ft):	0.0114	0.0114	0.0114	0.0114	0.0114	0.0114	0.0114	0.0114	0.0114	0.0114	0.0114	0.0114
Vapor Molecular Weight (lb/lb-mole):	28.3788	28.3788	28.3788	28.3788	28.3788	28.3788	28.3788	28.3788	28.3788	28.3788	28.3788	28.3788
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016
Daily Avg. Liquid Surface Temp. (deg. R):	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700
Daily Average Ambient Temp. (deg. F):	45.7500	51.1000	55.0000	61.2000	68.9500	76.5500	81.6500	80.2500	74.4500	65.2000	53.6000	45.4000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg. R):	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700
Tank Paint Solar Absorptance (Shell):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Tank Paint Solar Absorptance (Roof):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	668.1706	1,022.2439	1,488.6308	1,992.7729	2,390.9467	2,566.7143	2,551.4853	2,279.5850	1,860.7886	1,369.9719	851.6527	592.3431
Vapor Space Expansion Factor												
Vapor Space Expansion Factor:	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Daily Vapor Temperature Range (deg. R):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Daily Vapor Pressure Range (psia):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Breather Vent Press. Setting Range(psia):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016
Daily Avg. Liquid Surface Temp. (deg R):	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700
Daily Min. Liquid Surface Temp. (deg R):	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700
Daily Max. Liquid Surface Temp. (deg R):	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700	579.6700
Daily Ambient Temp. Range (deg. R):	16.7000	21.2000	23.2000	27.8000	30.5000	32.3000	33.5000	32.9000	31.3000	29.0000	22.2000	16.6000
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:	0.8341	0.8341	0.8341	0.8341	0.8341	0.8341	0.8341	0.8341	0.8341	0.8341	0.8341	0.8341
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016
Vapor Space Outage (ft):	1.5000	1.5000	1.5000	1.5000	1.5000	1.5000	1.5000	1.5000	1.5000	1.5000	1.5000	1.5000
Working Losses (lb):	147.5468	147.5468	147.5468	147.5468	147.5468	147.5468	147.5468	147.5468	147.5468	147.5468	147.5468	147.5468
Vapor Molecular Weight (lb/lb-mole):	28.3788	28.3788	28.3788	28.3788	28.3788	28.3788	28.3788	28.3788	28.3788	28.3788	28.3788	28.3788
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016	2.5016
Net Throughput (gal/mo.):	343,750.0000	343,750.0000	343,750.0000	343,750.0000	343,750.0000	343,750.0000	343,750.0000	343,750.0000	343,750.0000	343,750.0000	343,750.0000	343,750.0000
Annual Turnovers:	343.7500	343.7500	343.7500	343.7500	343.7500	343.7500	343.7500	343.7500	343.7500	343.7500	343.7500	343.7500
Turnover Factor:	0.2539	0.2539	0.2539	0.2539	0.2539	0.2539	0.2539	0.2539	0.2539	0.2539	0.2539	0.2539
Maximum Liquid Volume (gal):	12,000.0000	12,000.0000	12,000.0000	12,000.0000	12,000.0000	12,000.0000	12,000.0000	12,000.0000	12,000.0000	12,000.0000	12,000.0000	12,000.0000
Maximum Liquid Height (ft):	21.0000	21.0000	21.0000	21.0000	21.0000	21.0000	21.0000	21.0000	21.0000	21.0000	21.0000	21.0000
Tank Diameter (ft):	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	147.5468	147.5468	147.5468	147.5468	147.5468	147.5468	147.5468	147.5468	147.5468	147.5468	147.5468	147.5468

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

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

Tank P2 - Vertical Fixed Roof Tank
Fresno, California

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Wine 15.0% - 120 Degree F	1,770.56	0.00	1,770.56

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

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

Top Down BACT Analysis for 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 District performed a cost survey of stainless steel ducting/piping and found that the values stated in the Eichleay report including the cost of inflation (applied as stated below) were cheaper; therefore, as a conservative estimate, the District will use the cost of ducting/piping from the Eichleay report which will include ducting, fittings, bolt up, handle, and install. A summary of the survey is included in Attachment II.
- Eichleay's cost estimate for ducting included the duct, fittings, bolt up, handle and install. When additional costs, as allowed for in the EPA Control Cost Manual, were added onto the ducting cost estimate, the facility double counted some of the costs that Eichleay already accounted for in their estimate; therefore, the District did not allow the additional costs for foundations & supports, handling & erection, electrical, piping or painting.
- The collection system consists of stainless steel 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 typically established at six inches diameter at to provide adequate strength for spanning between supports; however, since this is a single tank, it will be assumed that three inch diameter piping will be used at half the cost.
- 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.
- Project Contingency: Good engineering practice and accepted norms of the engineering industry, when applied to a conceptual estimate of this type, require a project contingency exceeding 20%. Contingencies less than 10% are only achieved when preliminary engineering has been completed (all major equipment fully specified and firm quotations received, approved piping and instrumentation diagrams, plot plans and equipment layouts) plus a preliminary design basis and/or preliminary design sketches with material take-off for all significant cost components of the project. Contingencies less than 5% are only

applicable to projects for which all engineering is completed and approved for construction. Based on this discussion, the District will apply a conservative project contingency of 20% to the estimated capital investment for this project.

- Additionally, the facility included an inflation amount of 2.75% per year from 2005 through 2015 to adjust the Eichleay cost to present value. The District found this inflation value to be unfounded and was replaced with an inflation amount of 21.93% for the period of 2005 to 2016 taken from United States Department of Labor Bureau of Labor Statistics' CIP Inflation Calculator: http://www.bls.gov/data/inflation_calculator.htm.
- Typically a minimum duct size is established at 6" diameter at each tank to provide adequate strength for spanning between supports; however, since the ducting for this project is minimal, as a minimum ducting size, 3" pipe from the tanks to the main line will be used and as stated above.
- The Eichleay study did not provide costs for 3" pipe; therefore, the ratio of the 3" pipe cost to the 6" pipe cost from the District's cost survey of 54% ($30.85:$57.26) will be applied to Eichleay's 6" pipe cost. See Attachment II for a summary of the cost survey. Therefore, a cost of $33.57 ($62.27 x 54%) will be used for the 3" pipe.

Capital Cost of Ductwork

Connection from tank to main duct = (16.25 feet from tank to main duct) x $33.57/foot
= $545.55

Main duct = 25 feet x $33.57/foot
= $839.30

Knockout drum = $5,000

Structural support allowance and safety allowance since ethanol content is so high there is potential for explosion = $11,000

Total = $545.55 + $839.30 + $5,000 + $11,000 = $17,385

Per applicant, the overall estimated capital investment for the ductwork, knockout drum, and ducting isolation components is $17,385 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)

Ductwork	
Cost Description	Cost ($)
Duct Estimate from Eichleay Study 2005 Data	$17,385
Adjusting factor from 2005 dollars to 2016 dollars (21.93% inflation)	1.2193
Inflation adjusted duct cost	$21,198
The following cost data is taken from EPA Control Cost Manual, Sixth Edition (EPA/452/B-02-001).	
Direct Costs (DC)	
Base Equipment Costs (Ductwork) See Above	$21,198
Instrumentation 10%	$2,120
Sales Tax 4.0375%[1]	$ 856
Freight 5%	$1,060
Purchased equipment cost	**$25,234**
Foundations & supports 8% (allowance already included in cost estimate)	-
Handling & erection 14% (already included in Eichleay cost estimate)	-
Electrical 4% (not required)	-
Piping 2% (not required)	-
Painting 1% (not required)	-
Insulation 1%	$ 252
Direct installation costs	**$ 252**
Total Direct Costs	**$25,486**
Indirect Costs (IC)	
Engineering 10%	$2,523
Construction and field expenses 5%	$1,262
Contractor fees 10%	$2,523
Start-up 2%	$ 505
Performance test 1%	$ 252
Contingencies 20%	$5,047
Total Indirect Costs	**$12,112**
Total Capital Investment (TCI) (DC + IC)	**$37,598**

Annualized Capital Investment = Initial Capital Investment x Amortization Factor

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

Therefore,
Annualized Capital Investment for Ductwork = $37,598 x 0.163 = $6,128

[1] Pollution control equipment is qualify for CA tax partial exemption, and the exemption rate is 4.1875%, so the reduced sales tax rate is equal 4.0375% (8.225% - 4.1875%). http://www.boe.ca.gov/sutax/manufacturing_exemptions.htm#Purchasers

Clean-In-Place (CIP) System

A ducting system on a tank farm must have this system to maintain sanitation and quality of the product. The cost of operation of the CIP system has not been estimated. Operation of a CIP system, using typical cleaning agents, will raise disposal and wastewater treatment costs.

Clean-In-Place (CIP) System	
Cost Description	Cost ($)
Current cost of CIP system[2]	$10,000
The following cost data is taken from EPA Control Cost Manual, Sixth Edition (EPA/452/B-02-001).	
Direct Costs (DC)	
Base Equipment Costs (CIP System) See Above	$10,000
Instrumentation - 10% of base equipment	$1,000
Sales Tax - 4.0375% of base equipment	$ 404
Freight - 5% of base equipment	$ 500
Purchased equipment cost	**$11,904**
Foundations & supports - 8% of PEC	$ 952
Handling & erection - 14% of PEC	$1,667
Electrical - 4% of PEC	$ 476
Piping - accounted for in ductwork cost	-
Painting - 1% of PEC	$ 119
Insulation - 1% of PEC	$ 119
Direct installation costs	**$3,333**
Total Direct Costs	**$15,237**
Indirect Costs (IC)	
Engineering - 10% of PEC	$1,190
Construction and field expenses - 5% of PEC	$ 595
Contractor fees - 10% of PEC	$1,190
Start-up - 2% of PEC	$ 238
Performance test - 1% of PEC	$ 119
Contingencies - 20% of PEC	$2,381
Total Indirect Costs	**$5,713**
Total Capital Investment (TCI) (DC + IC)	**$20,950**

Annualized Capital Investment = Initial Capital Investment x Amortization Factor

Annualized Capital Investment for one CIP System = $20,950 x 0.163 = $3,415

[2] An Allowance of $200,000 for a CIP system should be included in the evaluation for a standard tank farm. A ducting system on a tank farm must have that kind of system to maintain sanitation and quality of the product. Because this tank is a single storage vessel, and will have 15% alcohol content; the estimate was reduced to $10,000.

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 VOC from the tank to the control device and a CIP system. 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, supporting structural steel, foundations and a CIP system alone are 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, 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.

Annual Emission Reduction = Uncontrolled Emissions x 0.98
= 1,062 lb-VOC/year x 0.98 x ton/2,000 lb
= 0.52 tons-VOC/year

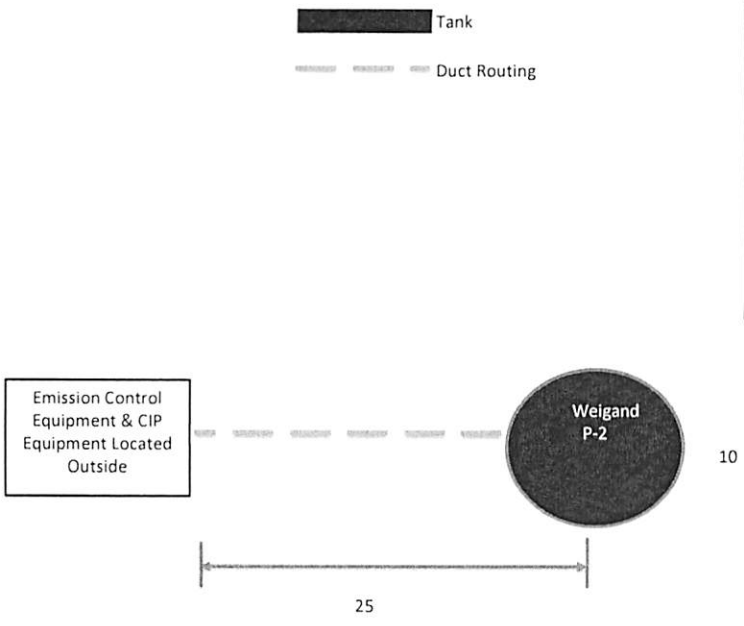
Cost Effectiveness = $(6,128 + 3,415)/year ÷ 0.52 tons-VOC/year
= $18,352/ton-VOC

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



It is assumed the emission controls and the CIP equipment can be located far enough from tank Weigand P-2 to remove the need for explosion proof electrical equipment. The safety considerations needed for this project can not be determined until a through safety review is completed. The concern is that the 120 Deg F will lead to an explosive vapor mixture. The Ya (alcohol mole fraction) is 0.37.

It is assume that an allowance of $5,000 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 $5,000 is included in the duct costing file.

Height of Tank in Feet 22.5

	Tank Farm Nominal Size	From	To	Gas Flow CFM	From Tank to Main Duct Length Feet	Design Duct Velocity from Eichleay Feet/Second	Nominal Duct Size diameter in inches	Standard Size of pipe	Number of Tanks to Connect	Total feet	Cost Per Foot from Eichleay	Cost	Comments
Connection to main duct D-201	12,000	Tank Center	Main Duct	3.6	16.25	40	0.53	6.00	1	16.25	$33.57	$545.55	Adjusted to 3 inch See below
Connection to main duct D-603	6,000	Tank Center	Main Duct	3.6	25	40	0.53	6.00	1	25.00	$33.57	$839.30	Adjusted to 3 inch See below

1) Eichleay's value for a knock out drum was *$46,300. Because* this tank is small the drum is envisioned to be about a 1000 gallons. 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 removed the duct spools and connection valve due to just one tank.

2) 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	$1,385
Knock Out Drum	$5,000
Structural Support Allowance	$6,000
Butterfly valves at duct connection to tank (Not needed with one tank)	$0
1 foot removable spool (Not needed with one tank)	$0
Allowance safety concerns due to hot vapor	$5,000
Ducting cost	**$17,385**

Attachment II

Ducting/Piping Cost Comparison

Duct Size Diameter (in.)	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"	28"
Eichleay - Ducting/Piping Only $/Foot	--	--	--	$23.17	$38.59	$54.00	$62.00	$65.50	$69.00	$86.00	$92.00	$99.00	$106.00	$119.00
Eichleay - Ducting/Piping Only $/Foot Including 21.93% for Inflation	--	--	--	$28.25	$47.05	$65.84	$75.60	$79.86	$84.13	$104.86	$112.18	$120.71	$129.25	$145.10
Average $/Foot from District Cost Survey	$15.49	$30.85	$27.67	$44.13	$37.50	$33.13	$93.75	$181.70	$216.50	$189.02	$308.40	--	$193.99	--
Average $/Foot from District Cost Survey from Suppliers of Both 3" and 6"	--	$30.85	--	$57.26	--	--	--	--	--	--	--	--	--	--

Ducting/Piping Costs based on Eichleay Report

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

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

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

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

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

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

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

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

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

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

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

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

Schedule 10 Pipe													
Duct Size Diameter (in.)	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"
Price ($)	$78.28	$108.97	$160.34	$288.00	$520.00	--	--	--	--	--	--	--	--
Length (feet)	8	8	8	8	8	--	--	--	--	--	--	--	--
Price/Foot ($)	$9.79	$13.62	$20.04	$36.00	$65.00	--	--	--	--	--	--	--	--
Weldeds Stainless Tube 304/304L (2" OD, 0.12" Wall; 3" OD, 0.12" Wall; 6", 0.12")													
Duct Size Diameter (in.)	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"
Price ($)	$109.86	$321.34	--	$628.16	--	--	--	--	--	--	--	--	--
Length (feet)	8	8	--	8	--	--	--	--	--	--	--	--	--
Price/Foot ($)	$13.73	$40.17	--	$78.52	--	--	--	--	--	--	--	--	--

Supplier: Lone Star Supply Co **Location: Dickinson, TX**

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

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

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

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)

X Federal Major Permit MODIFICATION
MINOR PERMIT MODIFICATION

[] ADMINISTRATIVE AMENDMENT

COMPANY NAME: E&J Gallo Winery - Fresno	FACILITY ID C-447
1. Type of Organization:[x] Corporation [ ] Sole Ownership [ ] Government [ ] Partnership [ ] Utility	
2. Owner's Name: E&J Gallo Winery-Fresno	
3. Agent to the Owner: Mr. Neil K. McDougald	

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

NKM 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).

NKM 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.

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

NKM 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:

Neil McDougald
Signature of Responsible Official

01/29/16
Date

Mr. Neil McDougald
Name of Responsible Official (please print)

Plant Manager- Fresno Winery
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:

$PE2_{quarterly}$ = $PE2_{annual}$ ÷ 4 quarters/year
= 1,062 lb/year ÷ 4 qtr/year
= 265.5 lb-VOC/qtr

$PE1_{quarterly}$= $PE1_{annual}$ ÷ 4 quarters/year
= 0 lb/year ÷ 4 qtr/year
= 0 lb-VOC/qtr

Quarterly NEC [QNEC]			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
VOC	265.5	0	265.5

Appendix E

Draft ATC

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: C-447-342-0

ISSUANCE DATE: DRAFT

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

LOCATION: 5610 E OLIVE AVE
FRESNO, CA 93727

EQUIPMENT DESCRIPTION:
12,000 GALLON INSULATED STAINLESS STEEL DECANTER MATERIAL STORAGE TANK (WEIGAND TANK) 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 - 398 lb, 2nd quarter - 398 lb, 3rd quarter - 398 lb, and fourth quarter - 399 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 2/18/16). [District Rule 2201] Federally Enforceable Through Title V Permit
4. ERC Certificate Number S-4664-1(or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services

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6. This tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The ethanol content of liquid stored in this tank shall not exceed 15.0 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The maximum liquid storage throughput in this tank shall not exceed 27,500 gallons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The maximum liquid storage throughput in this tank, calculated on a twelve month rolling basis, shall not exceed 4,125,000 gallons per year (equivalent to 1,062 lb-VOC/year). [District Rule 2201] Federally Enforceable Through Title V Permit
11. Daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of liquid transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
12. 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]
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 Rule 1070] Federally Enforceable Through Title V Permit