Santa Barbara County
Air Pollution Control District

Authority to Construct 15044 - 02

EQUIPMENT OWNER:

Central Coast Wine Services

EQUIPMENT OPERATOR:

Central Coast Wine Services

EQUIPMENT LOCATION:

2717 Aviation Way, Suite 101, Santa Maria

STATIONARY SOURCE/FACILITY:

Central Coast Wine Services

SSID: 10834
FID: 11042

AUTHORIZED MODIFICATION:

This permit authorizes fermentation of red and white wines in all of the previously installed 400 series tanks (Device IDs: 388059, 388060, 388061, and 388062), the installation of a new barrel room with a capacity of 2,500 barrels, and an associated increase to the daily mass emission limitations. The potential to emit of this project triggers Best Available Control Technology (BACT) requirements. Central Coast Wine Services will use NohBell's NoMoVo and EcoPAS LLC's EcoPAS wine emission capture and control systems to satisfy BACT requirements for wine fermentation. All fermentation tanks at this facility are required to be controlled by one of these two systems during wine fermentation.

EQUIPMENT DESCRIPTION:

The equipment subject to this permit is listed in the table at the end of this permit.

PROJECT/PROCESS DESCRIPTION:

Central Coast Wine Services (CCWS) is a winery that receives and crushes fruit for winemaking, ferments and ages wine, bottles wine, warehouses cases of bottled wine, and ships cases of bottled wine. CCWS is a federally licensed and bonded winery that allows other licensed wineries to lease or rent space for winemaking (called Lessee Operators and Alternating Proprietors).

This permit is solely for the CCWS and Alternating Proprietor (AP) operations in the "Main CCWS Operations Building". It does not cover the Lessee operations housed in the "Lessee Building". Lessee operations are not controlled by CCWS and are handled under separate permit(s) or exemption(s) by the District.

The wine fermentation process results in the release of reactive organic compounds (ROC) and carbon dioxide (CO_2) emissions. The ROC emissions are primarily ethanol. NoMoVo and EcoPAS capture and control systems are operated at the facility to control ROC emissions from all tanks during fermentation. The NoMoVo system uses a wet scrubber to entrain the ethanol in water prior to the exhaust being released to the atmosphere. The EcoPAS system uses a glycol chiller to condense the ethanol vapors prior to the exhaust being released to the atmosphere. These systems are defined as BACT and must be operated on all fermentation tanks during active fermentation.

CONDITIONS:

1. **Emission Limitations.** The mass emissions from the equipment permitted herein shall not exceed the values listed in Table 1. Compliance shall be based on the operational, monitoring, recordkeeping, and reporting conditions of this permit. Compliance with the total daily emission limit shall be based on the daily emissions calculated according to the requirements of the District-approved *Monitoring, Recordkeeping, and Reporting Plan*. Compliance with the annual emission limits shall be based on compiling the daily ROC emissions records for the year.

2. **Operational Restrictions.** The equipment permitted herein is subject to the following operational restrictions:

    a. The total red and/or white wine produced by fermentation as well as the amount of red and/or white wine stored in oak barrels at this facility may be adjusted based on the business needs of CCWS. Notwithstanding this allowance, the total emissions from this facility shall not exceed the limitations specified in Table 1. Compliance with this condition shall be based on the reports submitted according to the District-approved *Monitoring, Recordkeeping, and Reporting Plan*.

    b. No CCWS/AP fermentation or aging/storage operations shall occur in the "Lessee Building" located on the eastern side of the property. Lessee operations housed in the "Lessee Building" are not authorized by this permit.

c. Except as allowed by Condition 2.n, all tanks subject to this permit shall be closed and vented to a capture and control system during fermentation activities. The NoMoVo and/or EcoPAS control systems shall be operational at all times during fermentation operations in any tanks connected to the control equipment.

d. Collectively, the capture and control systems shall achieve a minimum combined capture and control efficiency of 67.0% (mass basis) over the entire fermentation season. Compliance with this condition shall be based on annual reporting as specified in Condition 5.k.

e. All NoMoVo and EcoPAS manifold piping shall be vapor tight and downslope to the associated capture and control system.

f. ROC emission reductions from the EcoPas and NoMoVo systems shall only be quantified based on the mass of captured and controlled ethanol from the previous 24 hour period.

g. All slurry/condensate drained from the NoMoVo and EcoPAS systems shall be treated or disposed per a District-approved method.

h. Each time a NoMoVo system slurry reservoir is recharged, the slurry shall be completely drained and replaced with fresh water.

i. The NoMoVo system slurry reservoir shall be drained every 24 hours when any tank connected to the system is actively fermenting.

j. The EcoPAS condensate collection vessels (Device ID: 388032) shall be vapor tight and vented back into the system's manifold except when condensate volume measurements and samples are being taken. All condensate shall be transferred to the stainless steel tote (Device ID: 388033) after being sampled and measured.

k. The EcoPAS condensate collection vessels (Device ID: 388032) shall be drained every 24 hours when any tank connected to the system is actively fermenting.

l. The EcoPAS stainless steel tote (Device ID: 388033) shall be vapor tight and only be opened when condensate is being transferred.

m. Prior to the opening of a closed top fermentation tank hatch or manway, the manifold inlet valve shall be closed.

n. Any fermentation tank undergoing active fermentation shall only be open to the atmosphere during the following non-standard operations: visual inspections, tank pump-overs, red wine cap breakups, delastage (rack and return), and wine additions. The time to perform these non-standard operations shall be minimized to the maximum extent possible.

o. Immediately following the completion of any non-standard operation authorized by Condition 2.n, the permittee shall ensure the tank hatch or manway is closed and vapor tight, the manifold inlet valve is opened, and the tank is vented to an operational capture and control system.

p. In the event of a foam-over, the permittee shall inspect and clean all capture and control system components downstream of the foam-over tank.

3. **Monitoring.** The equipment permitted herein is subject to the following monitoring requirements:

a. The permittee shall track the amount of red and white wine produced by fermentation and aged/stored in oak barrels on a daily basis (in units of gallons), as specified in the District-approved *Monitoring, Recordkeeping, and Reporting Plan*. This shall include CCWS and AP operations.

b. The permittee shall monitor Alternating Proprietor operator activities, as specified in the District-approved *Monitoring, Recordkeeping, and Reporting Plan*, to ensure that each operator provides accurate data and that their winery operations comply with this permit and District rules.

c. All fruit received for fermentation (both CCWS and AP operations) shall be weighed on CCWS' certified scale, and weight records shall be maintained.

d. The permittee shall measure the initial volume in each NoMoVo system slurry tank every time it is refilled with fresh water (in units of gallons).

e. The permittee shall measure the final volume in each NoMoVo system slurry tank every time the slurry is drained (in units of gallons).

f. The permittee shall gather a sample of slurry from each NoMoVo system's sample port every 24 hours when any tank connected to the system is actively fermenting. This sample shall be taken at the same time the slurry tank is drained. The sample shall be analyzed using a method approved by the District to determine the ethanol volume fraction. The ethanol volume fraction shall be used to quantify the captured and controlled ethanol in the daily emission spreadsheet.

g. Immediately prior to the beginning of each collection period, all EcoPAS collection vessels shall be completely empty of condensate.

h. The permittee shall measure the total captured condensate volume from the EcoPAS collection vessels every 24 hours when any tank connected to the system is actively fermenting. The measured volume shall be used to quantify the captured and controlled ethanol in the daily emission spreadsheet.

i. The permittee shall gather a sample of the condensate collected in the EcoPAS system collection vessels every 24 hours when any tank connected to the system is actively fermenting. This sample shall be taken at the same time the EcoPAS collection vessels are emptied. The sample shall be analyzed using a method approved by the District to determine the ethanol volume fraction. The ethanol volume fraction shall be used to quantify the captured and controlled ethanol in the daily emission spreadsheet.

j. The permittee shall monitor the collective capture and control efficiency of the NoMoVo and EcoPAS systems over an entire fermentation season, as specified in the District-approved *Monitoring, Recordkeeping, and Reporting Plan*.

4. **Recordkeeping.** The permittee shall record and maintain the following information. This data shall be maintained for a minimum of three (3) years from the date of each entry and made available to the District upon request:

a. The daily wine fermentation and aging/storage records required by the District-approved *Monitoring, Recordkeeping, and Reporting Plan*.

b. The amount of wine fermented each month (summed from the daily wine fermentation records required by the District-approved *Monitoring, Recordkeeping, and Reporting Plan*). This data shall be recorded for the CCWS and AP operations, listed separately and combined.

c. The monthly US Department of Treasury Alcohol and Tobacco Tax and Trade Bureau (TTB) "*Report of Wine Premises Operations*" reports for CCWS operations shall be maintained on site and shall be made available to the District upon request.

d. The monthly US Department of Treasury Alcohol and Tobacco Tax and Trade Bureau (TTB) "*Report of Wine Premises Operations*" reports for AP operations shall be maintained on site by each AP and shall be made available to the District upon request.

e. The annual (calendar year) amount of red wine produced by fermentation, white wine produced by fermentation, red wine aged/stored in oak barrels, and white wine aged/stored in oak barrels shall be summarized from the data required by the District-approved *Monitoring, Recordkeeping, and Reporting Plan*. These records shall be maintained in a clear and legible spreadsheet in units of gallons. This data shall be recorded for the CCWS and AP operations, listed separately and combined.

f. A current inventory of the total amount of red and white wine aged/stored in oak barrels shall be maintained onsite and made available to the District during inspections. This shall include the CCWS and AP inventories, listed separately and combined.

g. The data associated with the operation of each NoMoVo capture and control system shall be recorded in a log. Each entry shall be signed by the CCWS or NohBell employee who entered it. This data shall include:

i. The date and time each instance that fresh water is added to a NoMoVo system.

ii. The initial volume in each NoMoVo system slurry tank every time fresh water is added in units of gallons.

iii. The date and time each instance that slurry is drained from a NoMoVo system.

iv. The final volume in each NoMoVo system slurry tank every time that slurry is drained in units of gallons.

v. The date and time when a slurry sample is taken.

vi. The ethanol volume fraction in the slurry at the end of every 24 hour period when any tank connected to the system is actively fermenting.

vii. The slurry disposal or treatment method.

viii. The calculated mass of ethanol captured and controlled in pounds per day.

ix. The third party sample analysis results, performed annually as specified in Condition 7 of this permit.

h. The data associated with the operation of the EcoPAS capture and control system shall be recorded in a log. Each entry shall be signed by the CCWS or EcoPAS employee who entered it. This data shall include:

i. The date and time of the condensate collection vessel volume measurements.

ii. The daily volume of condensate in each individual collection vessel in units of gallons.

iii. The total daily volume of the captured condensate in units of gallons.

iv. The date and time when a condensate sample is taken.

v. The ethanol volume fraction of the condensate at the end of every 24 hour period when any tank connected to the system is actively fermenting.

vi. The daily volume of condensate sent to the laboratory for analysis in units of milliliters.

vii. The condensate disposal or treatment method.

viii. The calculated mass of ethanol captured and controlled in pounds per day.

ix. Confirmation that the condensate collection vessels were empty when reattached to the EcoPAS system.

x. The third party sample analysis results, performed annually as specified in Condition 7 of this permit.

i. The collective capture and control efficiency of the NoMoVo and EcoPAS systems, as specified in the District-approved *Monitoring, Recordkeeping, and Reporting Plan*.

5. **Reporting.** By March 1 of each year, a written report documenting compliance with the terms and conditions of this permit for the previous calendar year shall be provided by the permittee to the District (Attn: *Winery Project Manager*). The report shall contain information necessary to verify compliance with the emission limits and other requirements of this permit. The report shall be in a format approved by the District. All logs and other basic source data not included in the report shall be made available to the District upon request. The report shall include the following information:

a. The daily wine fermentation and aging/storage information required by the District-approved *Monitoring, Recordkeeping, and Reporting Plan*.

b. The annual (calendar year) amount of red wine produced by fermentation, white wine produced by fermentation, red wine aged/stored in oak barrels and white wine aged/stored in oak barrels in units of gallons for CCWS and AP operations.

c. The monthly US Department of Treasury Alcohol and Tobacco Tax and Trade Bureau (TTB) "*Report of Wine Premises Operations*" reports for CCWS operations.

d. The monthly US Department of Treasury Alcohol and Tobacco Tax and Trade Bureau (TTB) "*Report of Wine Premises Operations*" reports for AP operations.

e. A completed *Annual Winery Emissions Worksheet* (using the most current version). The worksheet may be downloaded at http://www.ourair.org/wineries/.

f. The most current tank equipment list and tank location map as the facility is configured on December 31st of each year. This shall include the CCWS and AP equipment.

g. The most current list of Alternating Proprietors operating at the facility on December 31st of each year.

h. The most current list of Lessees operating at the facility on December 31st of each year.

i. The data associated with the operation of the NoMoVo capture and control systems. Each entry shall be signed by the CCWS or NohBell employee who entered it. This data shall include:

   i. The date and time each instance that fresh water is added to a NoMoVo system.

   ii. The initial volume in each NoMoVo system slurry tank every time fresh water is added in units of gallons.

   iii. The date and time each instance that slurry is drained from a NoMoVo system.

   iv. The final volume in each NoMoVo system slurry tank every time that slurry is drained in units of gallons.

   v. The date and time when a slurry sample is taken.

   vi. The ethanol volume fraction in the slurry at the end of every 24 hour period when any tank connected to the system is actively fermenting.

   vii. The slurry disposal or treatment method.

   viii. The calculated mass of ethanol captured and controlled in pounds per day.

   ix. The third party sample analysis results, performed annually as specified in Condition 7 of this permit.

j. The data associated with the operation of the EcoPAS capture and control system. Each entry shall be signed by the CCWS or EcoPAS employee who entered it. This data shall include:

   i. The date and time of the condensate collection vessel volume measurements.

   ii. The daily volume of condensate in each individual collection vessel in units of gallons.

   iii. The total daily volume of the captured condensate in units of gallons.

   iv. The date and time when a condensate sample is taken.

   v. The ethanol volume fraction of the condensate at the end of every 24 hour period when any tank connected to the system is actively fermenting.

   vi. The daily volume of condensate sent to the laboratory for analysis in units of milliliters.

   vii. The condensate disposal or treatment method.

viii. The calculated mass of ethanol captured and controlled in pounds per day.

ix. Confirmation that the condensate collection vessels were empty when reattached to the EcoPAS system.

x. The third party sample analysis results, performed annually as specified in Condition 7 of this permit.

k. The collective capture and control efficiency of the NoMoVo and EcoPAS capture and control systems, as specified in the District-approved *Monitoring, Recordkeeping, and Reporting Plan*.

6. **Best Available Control Technology (BACT).** The permittee shall apply emission control technology and plant design measures that represent Best Available Control Technology (BACT) to the operation of the equipment/facilities as described in this permit and the District's Permit Evaluation for this permit. Table 3 and the *Emissions Limitations, Operational Restrictions, Monitoring, Recordkeeping and Reporting* Conditions of this permit define the specific control technology and performance standard emission limits for BACT. BACT shall be in place, and shall be operational at all times for the life of the project. BACT related monitoring, recordkeeping and reporting requirements are defined in those specific permit conditions.

7. **Sampling.** A qualified third-party individual shall obtain and analyze one sample from the NoMoVo and EcoPAS systems once per year. This sample analysis shall be completed in conjunction with the permittee's sample analysis and compared to the permittee's results.

8. **Expedited Tank Changes.** The permittee may install fermentation tanks and aging/storage tanks to the current tank inventory at this facility using the Interim Permit Approval Process (IPAP) Program. To obtain an IPAP approval for expedited tank installation, the permittee shall submit the following:

a. District Form -01

b. District Form -50

c. Revised Tank Location Map showing the location of each tank by ID number on a Plot Plan for the facility.

d. Application Filing Fee

Once the permit application has been deemed complete, the permittee may install the new tanks in accordance with the conditions of the IPAP Approval Letter and Program Agreement.

9. **Source Compliance Demonstration Period (SCDP).** Equipment permitted herein is allowed to operate temporarily during a 90-day SCDP or the entire fermentation season, whichever is longer. Initial operations of the permitted equipment (defined as the commencement of any activities applied for and authorized by this permit) define the start of the SCDP. During the SCDP, the permittee shall comply with all operational, monitoring, recordkeeping and reporting requirements as specified in this permit.

   Prior to the start of the SCDP, the permittee shall:

   a. Submit and obtain District approval of a revised *Monitoring, Recordkeeping, and Reporting Plan*. This plan update shall address all the permit monitoring, recordkeeping and reporting requirements associated with the EcoPAS and NoMoVo systems. This shall include the capture and control efficiency calculation methodology.

   During the SCDP, the permittee shall:

   b. Within 14 days of initial operations, the permittee shall provide the District written notification of the SCDP start date (using the attached yellow SCDP notification card or by e-mail notification to enfr@sbcapcd.org).

   c. Begin the monitoring and recordkeeping as specified in the Monitoring and Recordkeeping Conditions of this permit;

   d. Arrange for District inspection not more than fourteen (14) calendar days (or other mutually agreed to time period) after the SCDP begins. An inspection can be arranged via e-mail to enfr@sbcapcd.org or by calling the District Compliance Division at (805) 961-8800. A minimum of five calendar days advance notice shall be given to the District. This inspection is required to verify that the equipment and its operation are in compliance with District Rules and Permit Conditions;

   e. Submit a Permit to Operate (PTO) application and the appropriate filing fee not more than 60 calendar days after the SCDP begins pursuant to District Rule 201.E.2. Upon the District's determination that the permit application is "complete", the permittee may continue temporary operations under the SCDP until such time the PTO is issued final or one year from the date of PTO application completeness, whichever occurs earlier.

   SCDP extensions may be granted by the District for good cause. Such extensions may be subject to conditions. When good cause cannot be demonstrated, no administrative extension is available and the permittee shall cease operations or the permittee may submit an application to revise the ATC permit. A written request to extend the SCDP shall be made by the permittee at least seven days prior to the SCDP expiration date.

10. **Alternating Proprietors.** Central Coast Wine Services shall be responsible for updating the list of Alternating Proprietors included in Table 2 of this permit. Updates to Table 2 shall be made annually by March 1st.

11. **Weekly Reporting During Fermentation.** The permittee shall submit the information listed below on a weekly basis while fermentation is taking place at the facility. The first report shall be submitted within fourteen (14) days of initial fermentation each year. The subsequent reports shall be submitted seven (7) days after each previous report submittal until the fermentation season has finished. The submittals shall include the following:

    a. The amount of wine fermented each week (summed from the daily wine fermentation records required by the District-approved *Monitoring, Recordkeeping, and Reporting Plan*). This data shall be recorded for the CCWS and AP operations, listed separately and combined.

    b. The total amount of red and white wine aged/stored in oak barrels at the facility. This data shall be recorded for the CCWS and AP operations, listed separately and combined.

    c. The daily amount of ethanol captured and controlled in each NoMoVo and EcoPAS system in pounds per day.

    The weekly update frequency may be revised based on District discretion.

12. **Boiler/Large Water Heater Compliance**. The permittee shall comply with the District's boiler and large water heaters rules as summarized below:

    a. *Rule 360* - Any boiler or hot water heater rated at or less than 2.000 MMBtu/hr and manufactured and/or installed after October 17, 2003 shall be certified per the provisions of Rule 360 (as revised on March 15, 2018). An ATC/PTO permit shall be obtained prior to installation of any grouping of Rule 360 applicable boilers or hot water heaters whose combined system design heat input rating exceeds 2.000 MMBtu/hr.

    b. *Rule 361* - Any boiler or hot water heater rated more than 2.000 MMBtu/hr and less than 5.000 MMBtu/hr shall comply with the requirements of Rule 361. An ATC permit shall be obtained prior to the installation or modification of any Rule 361 applicable boiler or hot water heater.

    c. *Rule 342* - Any hot-water or steam boiler rated at 5.000 MMBtu/hr or greater shall comply with the requirements of Rule 342. An ATC permit shall be obtained prior to the installation or modification of any Rule 342 applicable boiler.

13. **Lessee Permits**. All future contracts between CCWS and Lessees shall include language that requires Lessees to obtain all necessary licenses and permits to comply with county and local regulations including District permit(s) or exemption(s).

14. **Consistency with Analysis.** Operation under this permit shall be conducted consistent with all data, specifications and assumptions included with the application and supplements thereof (as documented in the District's project file) and the District's analyses under which this permit is issued as documented in the Permit Analyses prepared for and issued with the permit.

15. **Equipment Maintenance.** The equipment listed in this permit shall be properly maintained and kept in good condition at all times. The equipment manufacturer's maintenance manual, maintenance procedures and/or maintenance checklists (if any) shall be kept on site.

16. **Compliance.** Nothing contained within this permit shall be construed as allowing the violation of any local, state or federal rules, regulations, air quality standards or increments.

17. **Severability.** In the event that any condition herein is determined to be invalid, all other conditions shall remain in force.

18. **Conflict Between Permits.** The requirements or limits that are more protective of air quality shall apply if any conflict arises between the requirements and limits of this permit and any other permitting actions associated with the equipment permitted herein.

19. **Access to Records and Facilities.** As to any condition that requires for its effective enforcement the inspection of records or facilities by the District or its agents, the permittee shall make such records available or provide access to such facilities upon notice from the District. Access shall mean access consistent with California Health and Safety Code Section 41510 and Clean Air Act Section 114A.

20. **Equipment Identification.** Identifying tag(s) or name plate(s) shall be displayed on the equipment to show manufacturer, model number, and serial number. The tag(s) or plate(s) shall be affixed to the equipment in a permanent and conspicuous position.

21. **Emission Factor Revisions.** The District may update the emission factors for any calculation based on USEPA AP-42, CARB or District emission factors at the next permit modification or permit reevaluation to account for USEPA, CARB and/or District revisions to the underlying emission factors.

22. **Nuisance.** Except as otherwise provided in Section 41705 of the California H&SC, no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

23. **Grounds for Revocation.** Failure to abide by and faithfully comply with this permit or any Rule, Order, or Regulation may constitute grounds for revocation pursuant to California Health & Safety Code Section 42307 *et seq*.

24. **Transfer of Owner/Operator.** This permit is only valid for the owner and operator listed on this permit unless a *Transfer of Owner/Operator* application has been applied for and received by the District. Any transfer of ownership or change in operator shall be done in a manner as specified in District Rule 203. District Form –01T and the appropriate filing fee shall be submitted to the District within 30 days of the transfer.

25. **Documents Incorporated by Reference.** The documents listed below, including any District-approved updates thereof, are incorporated herein by reference and shall have the full force and effect of a permit condition for this permit. These documents shall be implemented for the life of the Project and shall be made available to District inspection staff upon request.

    a. *Monitoring, Recordkeeping, and Reporting Plan* (to be updated)

    b. *Sampling Plan* (approved August 6, 2015)

    If at any time the District determines that the Plan(s) are not effective for determining compliance, the District may request an update to the Plan(s) to be submitted for District approval within 30 days of written notification from the District. Any District-approved updates shall be enforceable under this permit.

AIR POLLUTION CONTROL OFFICER

JUN 05 2018

DATE

Attachments:

- Table 1 – Permitted Emission Limits
- Table 2 – Alternating Proprietors
- Table 3 – Best Available Control Technology
- Permit Equipment List(s)
- Permit Evaluation for Authority to Construct 15044 - 02

Notes:

- This permit is valid for one year from the date stamped above if unused.
- This permit supersedes ATC 15044 and ATC 15044 - 01
- If used, this permit supersedes PTO 14696

TABLE 1 - Permitted Emissions
ATC 15044 - 02
Central Coast Wine Services

Process	ROC	
	lb/day	ton/yr
Total Facility Emissions (CCWS and AP Operations)[1,2]	**174.98**	**9.99**

Notes:
1. The total daily emissions limit includes fermentation and aging/storage of red and white wine.
2. The total annual emissions limit includes fermentation and/or aging/storage of red and white wine.

TABLE 2 - Alternating Proprietors
ATC 15044 - 02
Central Coast Wine Services

	Alternating Proprietors (as of January 1, 2017)
1	Alapay Cellars, Inc.
2	BWSC, Inc dba Club W
3	Costa de Ora
4	DV8 Cellars
5	K&E Consulting, LLC
6	Kunin Wines
7	Maurice and Susan Wedell dba Wedell Cellars
8	Moro Vintners
9	Nagy Wines
10	Nipomo Wine Group
11	No Limits Wines, LLC
12	Olive House, Inc. dba Feeley Wines
13	Paul Lato Wines, LLC
14	Peacock Cellars, Inc.
15	Runaway Vineyards
16	Sans Liege Wines
17	Shirah Wine Company
18	Stone Pine Estate
19	Tatomer, Inc.
20	Timeless Palates
21	Turn Key Wine Brands, LLC
22	Wine Apothecary
23	Zinke Family Wines, LLC

TABLE 3 - Best Available Control Technology
ATC 15044 - 02
Central Coast Wine Services

Emission Source	Pollutant	BACT Technology	BACT Performance Standard
Wine Fermentation Tanks: Closed-Top ≤ 30,000 gallons	ROC (ethanol)	NoMoVo Water Scrubber and/or EcoPAS Chiller Condenser	Combined capture and control efficiency of 67.0% (mass basis) over an entire fermentation season

PERMIT EQUIPMENT LIST - TABLE A

ATC 15044 / FID: 11042 Central Coast Wine Services / SSID: 10834

A PERMITTED EQUIPMENT

1 Steel Tanks 111-114

Device ID #	**111915**	***Device Name***	**Steel Tanks 111-114**
Rated Heat Input		*Physical Size*	10,480 Gallons
Manufacturer		*Operator ID*	111-114
Model		*Serial Number*	
Location Note	Tank Room		
Device Description	Four tanks. Each tank is 10,480 gallons, dimensions: 9.96' D x 19.04' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV		

2 Steel Tanks 115-118

Device ID #	**111916**	***Device Name***	**Steel Tanks 115-118**
Rated Heat Input		*Physical Size*	10,420 Gallons
Manufacturer		*Operator ID*	115-118
Model		*Serial Number*	
Location Note	Tank Room		
Device Description	Four tanks. Each tank is 10,420 gallons, dimensions: 9.92' D x 19.04' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV		

3 Steel Tanks 119, 221, 321-322

Device ID #	**111903**	***Device Name***	**Steel Tanks 119, 221, 321-322**
Rated Heat Input		*Physical Size*	1,610 Gallons
Manufacturer		*Operator ID*	119, 221, 321-322
Model		*Serial Number*	
Location Note	Tank Room		
Device Description	Four tanks. Each tank is 1,610 gallons, dimensions: 5.92' D x 7.94' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV		

4 Steel Tanks 121-126

Device ID #	**111917**	***Device Name***	**Steel Tanks 121-126**
Rated Heat Input		*Physical Size*	20,701 Gallons
Manufacturer		*Operator ID*	121-126
Model		*Serial Number*	
Location Note	Tank Room		
Device Description	Six tanks. Each tank is 20,701 gallons, dimensions: 13.92' D x 19.96' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV		

5 Steel Tank 127

Device ID #	**388054**	***Device Name***	**Steel Tank 127**
Rated Heat Input		*Physical Size*	4,571 Gallons
Manufacturer		*Operator ID*	127
Model		*Serial Number*	
Location Note	Tank Room		
Device Description	Dimensions: 8.00' D x 12.38' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV		

6 Steel Tanks 128, 138

Device ID #	**388055**	***Device Name***	**Steel Tanks 128, 138**
Rated Heat Input		*Physical Size*	4,540 Gallons
Manufacturer		*Operator ID*	128, 138
Model		*Serial Number*	
Location Note	Tank Room		
Device Description	Two tanks. Each tank is 4,540 gallons, dimensions: 7.92' D x 12.35' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV		

7 Steel Tanks 131-132, 141-142

Device ID #	**111918**	***Device Name***	**Steel Tanks 131-132, 141-142**
Rated Heat Input		*Physical Size*	14,472 Gallons
Manufacturer		*Operator ID*	131-132, 141-142
Model		*Serial Number*	
Location Note	Tank Room		
Device Description	Four tanks. Each tank is 14,472 gallons, dimensions: 13.92' D x 15.17' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV		

8 Steel Tanks 133-137, 143-147

Device ID #	**111919**	***Device Name***	**Steel Tanks 133-137, 143-147**
Rated Heat Input		*Physical Size*	15,006 Gallons
Manufacturer		*Operator ID*	133-137, 143-147
Model		*Serial Number*	
Location Note	Tank Room		
Device Description	Ten tanks. Each tank is 15,006 gallons, dimensions: 13.19' D x 16.00' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV		

9 Steel Tanks 148

Device ID #	**111937**	***Device Name***	**Steel Tanks 148**
Rated Heat Input		*Physical Size*	1,261 Gallons
Manufacturer		*Operator ID*	148
Model		*Serial Number*	
Location Note	Tank Room		
Device Description	Dimensions: 5.42' D x 7.60' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV		

10 Steel Tanks 149, 158, 323

Device ID #	**388680**	***Device Name***	**Steel Tanks 149, 158, 323**
Rated Heat Input		*Physical Size*	1,703 Gallons
Manufacturer		*Operator ID*	149, 158, 323
Model		*Serial Number*	
Location Note	Tank Room		
Device Description	Three tanks. Each tank is 1,703 gallons, dimensions: 5.92' D x 8.58' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV		

11 Steel Tanks 151-152, 161-162

Device ID #	**111920**	***Device Name***	**Steel Tanks 151-152, 161-162**
Rated Heat Input		*Physical Size*	21,232 Gallons
Manufacturer		*Operator ID*	151-152, 161-162
Model		*Serial Number*	
Location Note	Tank Room		
Device Description	Four tanks. Each tank is 21,232 gallons, dimensions: 14.71' D x 17.79' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV		

12 Steel Tanks 153-156, 163-166

Device ID #	**111921**	***Device Name***	**Steel Tanks 153-156, 163-166**
Rated Heat Input		*Physical Size*	20,125 Gallons
Manufacturer		*Operator ID*	153-156, 163-166
Model		*Serial Number*	
Location Note	Tank Room		
Device Description	Eight tanks. Each tank is 20,125 gallons, dimensions: 14.08' D x 18.46' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV		

13 Steel Tanks 157, 324-325

Device ID #	**111938**	***Device Name***	**Steel Tanks 157, 324-325**
Rated Heat Input		*Physical Size*	2,026 Gallons
Manufacturer		*Operator ID*	157, 324-325
Model		*Serial Number*	
Location Note	Tank Room		
Device Description	Three tanks. Each tank is 2,026 gallons, dimensions: 6.46' D x 8.54' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV		

14 Steel Tank 167

Device ID #	**111925**	***Device Name***	**Steel Tank 167**
Rated Heat Input		*Physical Size*	3,030 Gallons
Manufacturer		*Operator ID*	167
Model		*Serial Number*	
Location Note	Tank Room		
Device Description	Dimensions: 7.35' D x 9.73' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV		

15 Steel Tanks 171-173, 181-183

Device ID #	**111922**	***Device Name***	**Steel Tanks 171-173, 181-183**
Rated Heat Input		*Physical Size*	7,296 Gallons
Manufacturer		*Operator ID*	171-173, 181-183
Model		*Serial Number*	
Location Note	Tank Room		
Device Description	Six tanks. Each tank is 7,296 gallons, dimensions: 11.21' D x 11.00' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV		

16 Steel Tanks 174-176, 184-186

Device ID #	**388679**	***Device Name***	**Steel Tanks 174-176, 184-186**
Rated Heat Input		*Physical Size*	7,311 Gallons
Manufacturer		*Operator ID*	174-176, 184-186
Model		*Serial Number*	
Location Note	Tank Room		
Device Description	Six tanks. Each tank is 7,311 gallons, dimensions: 11.21' D x 11.00' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV		

17 Steel Tanks 211-213

Device ID #	**111923**	***Device Name***	**Steel Tanks 211-213**
Rated Heat Input		*Physical Size*	6,272 Gallons
Manufacturer		*Operator ID*	211-213
Model		*Serial Number*	
Location Note	Tank Room		
Device Description	Three tanks. Each tank is 6,272 gallons, dimensions: 9.79' D x 11.50' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV		

18 Steel Tank 214

Device ID #	**111924**	***Device Name***	**Steel Tank 214**
Rated Heat Input		*Physical Size*	5,787 Gallons
Manufacturer		*Operator ID*	214
Model		*Serial Number*	
Location Note	Tank Room		
Device Description	Dimensions: 9.92' D x 9.98' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV		

19 Steel Tanks 215-220

Device ID #	**111936**	***Device Name***	**Steel Tanks 215-220**
Rated Heat Input		*Physical Size*	3,030 Gallons
Manufacturer		*Operator ID*	215-220
Model		*Serial Number*	
Location Note	Tank Room		
Device Description	Six tanks. Each tank is 3,030 gallons, dimensions: 7.35' D x 9.73' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV		

20 Steel Tanks 331-332

Device ID #	**111905**	***Device Name***	**Steel Tanks 331-332**
Rated Heat Input		*Physical Size*	3,111 Gallons
Manufacturer		*Operator ID*	331-332
Model		*Serial Number*	
Location Note	Outside by Bottling		
Device Description	Two tanks. Each tank is 3,111 gallons, dimensions: 6.71' D x 11.58' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV		

21 Steel Tanks 333-334, 345-346

Device ID #	**111901**	***Device Name***	**Steel Tanks 333-334, 345-346**
Rated Heat Input		*Physical Size*	3,544 Gallons
Manufacturer		*Operator ID*	333-334, 345-346
Model		*Serial Number*	
Location Note	Outside by Bottling		
Device Description	Four tanks. Each tank is 3,544 gallons, dimensions: 6.92' D x 13.21' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV		

22 Steel Tanks 341-343

Device ID #	**111902**	***Device Name***	**Steel Tanks 341-343**
Rated Heat Input		*Physical Size*	1,031 Gallons
Manufacturer		*Operator ID*	341-343
Model		*Serial Number*	
Location Note	Outside by Bottling		
Device Description	Three tanks. Each tank is 1,031 gallons, dimensions: 4.71' D x 8.17' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV		

23 Steel Tank 344

Device ID #	**111899**	***Device Name***	**Steel Tank 344**
Rated Heat Input		*Physical Size*	4,432 Gallons
Manufacturer		*Operator ID*	344
Model		*Serial Number*	
Location Note	Outside by Bottling		
Device Description	Dimensions: 7.71' D x 13.5' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV		

24 400 Series Tanks

24.1 Steel Tanks 401-405, 411-415

Device ID #	**388059**	***Device Name***	**Steel Tanks 401-405, 411-415**
Rated Heat Input		*Physical Size*	14,980 Gallons
Manufacturer		*Operator ID*	401-405, 411-415
Model		*Serial Number*	
Location Note	Tank Room		
Device Description	Ten tanks. Each tank is 14,980 gallons, dimensions: 11.25' D x 21.05' H, closed roof, steel, insulated, fermentation and storage use, equipped with PRV		

24.2 Steel Tanks 421, 423-424, 452

Device ID #	**388060**	***Device Name***	**Steel Tanks 421, 423-424, 452**
Rated Heat Input		*Physical Size*	14,980 Gallons
Manufacturer		*Operator ID*	421, 423-424, 452
Model		*Serial Number*	
Location Note	Tank Room		
Device Description	Four tanks. Each tank is 14,980 gallons, dimensions: 11.25' D x 21.05' H, closed roof, 304 2B stainless steel, insulated, fermentation and storage use, equipped with PRV		

24.3 Steel Tanks 422, 431-434, 441-444, 451, 453-454

Device ID #	**388061**	***Device Name***	**Steel Tanks 422, 431-434, 441-444, 451, 453-454**
Rated Heat Input		*Physical Size*	20,736 Gallons
Manufacturer		*Operator ID*	422, 431-434, 441-444, 451, 453-454
Model		*Serial Number*	
Location Note	Tank Room		
Device Description	Twelve tanks. Each tank is 20,736 gallons, dimensions: 13.25' D x 20.99' H, closed roof, 304 2B stainless steel, insulated, fermentation and storage use, equipped with PRV		

24.4 Steel Tanks 461-465, 471-475, 481-484

Device ID #	**388062**	***Device Name***	**Steel Tanks 461-465, 471-475, 481-484**
Rated Heat Input		*Physical Size*	7,527 Gallons
Manufacturer		*Operator ID*	461-465, 471-475, 481-484
Model		*Serial Number*	
Location Note	Tank Room		
Device Description	Fourteen tanks. Each tank is 7,527 gallons, dimensions: 10.25' D x 13.05' H, closed roof, 304 2B stainless steel, insulated, fermentation and storage use, equipped with PRV		

25 Steel Tanks 601-604

Device ID #	**111934**	***Device Name***	**Steel Tanks 601-604**
Rated Heat Input		*Physical Size*	1,130 Gallons
Manufacturer		*Operator ID*	601-604
Model		*Serial Number*	
Location Note	Breezeway		
Device Description	Four tanks. Each tank is 1,130 gallons, dimensions: 5.50' D x 6.79' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV		

26 Steel Tanks 605-608

Device ID #	**111935**	***Device Name***	**Steel Tanks 605-608**
Rated Heat Input		*Physical Size*	1,614 Gallons
Manufacturer		*Operator ID*	605-608
Model		*Serial Number*	
Location Note	Breezeway		
Device Description	Four tanks. Each tank is 1,614 gallons, dimensions: 5.75' D x 8.75' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV		

27 Steel Tank PTC1

Device ID #	**111939**	***Device Name***	**Steel Tank PTC1**
Rated Heat Input		*Physical Size*	351 Gallons
Manufacturer		*Operator ID*	PTC1
Model		*Serial Number*	
Location Note	Portable		
Device Description	Dimensions: 3.61' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV, portable		

28 Steel Tanks PTC2-PTC4

Device ID #	**111940**	***Device Name***	**Steel Tanks PTC2-PTC4**
Rated Heat Input		*Physical Size*	450 Gallons
Manufacturer		*Operator ID*	PTC2-PTC4
Model		*Serial Number*	
Location Note	Portable		
Device Description	Three tanks. Each tank is 450 gallons, dimensions: 4.48' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV, portable		

29 Steel Tanks PTC5-PTC6

Device ID #	**111941**	***Device Name***	**Steel Tanks PTC5-PTC6**
Rated Heat Input		*Physical Size*	550 Gallons
Manufacturer		*Operator ID*	PTC5-PTC6
Model		*Serial Number*	
Location Note	Portable		
Device Description	Two tanks. Each tank is 550 gallons, dimensions: 5.47' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV, portable		

30 Steel Tanks PTC9-PTC12

Device ID #	**111943**	***Device Name***	**Steel Tanks PTC9-PTC12**
Rated Heat Input		*Physical Size*	680 Gallons
Manufacturer		*Operator ID*	PT9-PT12
Model		*Serial Number*	
Location Note	Portable		
Device Description	Four tanks. Each tank is 680 gallons, dimensions: 4.71' D x 5.35' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV		

31 Steel Tanks PTC21-PTC24

Device ID #	**111942**	***Device Name***	**Steel Tanks PTC21-PTC24**
Rated Heat Input		*Physical Size*	550 Gallons
Manufacturer		*Operator ID*	PTC21-PTC24
Model		*Serial Number*	
Location Note	Portable		
Device Description	Four tanks. Each tank is 550 gallons, dimensions: 5.42' H, closed roof, steel, not insulated, fermentation and storage use, equipped with PRV		

32 NoMoVo Wine Emission Capture and Control System

Device ID #	**386512**	***Device Name***	**NoMoVo Wine Emission Capture System**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	TBD
Model		*Serial Number*	TBD
Location Note			
Device Description	Up to six wine emission capture and control units, connected to fermentation tanks, each system contains a wet scrubber with continuously recycled slurry tank, equipped with sample port, manufacturer guarantee of 67.% combined capture/control efficiency		

33 EcoPAS Wine Emission Capture and Control System

Device ID #	**388029**	***Device Name***	**EcoPAS System**
Rated Heat Input		*Physical Size*	
Manufacturer	EcoPAS LLC	*Operator ID*	TBD
Model		*Serial Number*	TBD
Location Note			
Device Description	Operational pressure of 4.5" water column, maximum flow of 350 scfm, equipped with pressure, temperature, flow, and VOC sensors, near horizontal orientation, manufacturer guarantee of 67.0% combined capture/control efficiency		

33.1 Condensate Collection Vessels

Device ID #	**388032**	***Device Name***	**Condensate Collection Vessels**
Rated Heat Input		*Physical Size*	15 Gallons
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Three vessels, 15 gallons each, stainless steel, used to collect condensate from the EcoPAS system, set up at various capture points in the system, captured condensate is gravity fed		

33.2 Stainless Steel Tote

Device ID #	**388033**	***Device Name***	**Stainless Steel Tote**
Rated Heat Input		*Physical Size*	250 Gallons
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Holds captured condensate after measurements are taken from the condensate collection vessels		

34 Barrel Storage Room

Device ID #	**388058**	***Device Name***	**Barrel Storage Room**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Directly to the north of the Tank Room, capacity of 2,500 barrels		

B EXEMPT EQUIPMENT

1 Glycol System

Device ID #	**388030**	***Device Name***	**Glycol System**
Rated Heat Input		*Physical Size*	
Manufacturer	York	*Operator ID*	
Model	YVAA0273DGV46	*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:* 201.A No Potential To Emit Air Contaminants	
Location Note			
Device Description	Twin screw compressor, circulates glycol to temperature control tanks and condense ethanol vapor in the EcoPAS system		

2 Glycol Backup System

Device ID #	**388031**	***Device Name***	**Glycol Backup System**
Rated Heat Input		*Physical Size*	
Manufacturer	Trane	*Operator ID*	
Model	RTAA 1004XF01A1COKBDFN	*Serial Number*	U96D33776
Part 70 Insig?	No	*District Rule Exemption:* 201.A No Potential To Emit Air Contaminants	
Location Note			
Device Description	Backup system, rotary screw, two compressors, circulates glycol to temperature control tanks and condense ethanol vapor in the EcoPAS system		

Santa Barbara County
Air Pollution Control District

PERMIT EVALUATION FOR
AUTHORITY TO CONSTRUCT 15044 - 02

1.0 BACKGROUND

1.1 General: Central Coast Wine Services is a winery that receives and crushes fruit for winemaking, ferments and ages wine, bottles wine, warehouses cases of bottled wine, and ships cases of bottled wine. Central Coast Wine Services is a federally licensed bonded winery that allows other licensed wineries known as Alternating Proprietors (AP) and Lessee Operators to lease or rent space for winemaking. Emissions occur from the fermentation and the aging/storage of wine in oak barrels.

Central Coast Wine Services (CCWS) was issued an Authority to Construct/Permit to Operate (ATC/PTO) for a wine processing facility at 2717 Aviation Way in Santa Maria on June 5, 2009. This permit was issued to bring existing equipment at the wine center under permit and to ensure compliance with District rules and regulations. This was the first permit for this facility.

On August 5, 2013, CCWS submitted an application for ATC 14257 to install a single NoMoVo system to capture and control ethanol emissions from fermentation activities at the wine center. This capture and control system operated at CCWS' discretion to allow CCWS to keep their daily emissions under the NSR offsets threshold of 55 pounds per day. A final ATC was issued for the NoMoVo system on September 23, 2013. The system first operated on September 30, 2013 and successfully captured and controlled ethanol emissions throughout the 2013 fermentation season. A final Permit to Operate was issued on December 13, 2013.

On July 21, 2015, an application for ATC 14696 was submitted for the installation of a single EcoPAS system, up to six NoMoVo systems, and the forty 400 series tanks. Of the forty 400 series tanks, ten where permitted for white fermentation and wine storage and the remaining thirty were permitted exclusively for wine storage. Similar to the existing NoMoVo systems, CCWS was permitted to use the EcoPAS system at their discretion; again to keep their daily emissions under the NSR offsets threshold of 55 pounds per day. A final ATC for this project was issued on July 24, 2015. This system first operated on August 29, 2015.

Since the initial NoMoVo system was installed in 2013 and the EcoPAS system was installed in 2015, each system has consistently proven to be effective in capturing and controlling ethanol emissions from wine fermentation. This has allowed CCWS to increase the daily wine production at the facility without exceeding the permitted emission limits.

Central Coast Wine Services submitted the application for ATC 15044 on April 26, 2017 and the District issued the final permit on August 18, 2017. This permit authorized red and white wine fermentation and storage in the existing 400 series tanks (Device IDs: 388059, 388060, 388061, and 388062) and the installation of a new barrel room. Additionally, this permit increased the daily potential to emit of the facility by 119.99 pounds per day. No increase to the annual permitted emission limit was requested for this project. The District's BACT threshold of 25 pounds per day was exceeded as a result of this change. CCWS proposed the use of the NoMoVo and EcoPAS emission capture and control systems as BACT for this project. In addition, to simplify their operations and allow for maximum operational flexibility, CCWS elected to also install these BACT capture and control systems on all the fermentation tanks at the facility.

On September 15, 2017, CCWS submitted an application to modify the calculation methodology for the combined capture and control efficiency for the EcoPAS and NoMoVo systems found in ATC 15044. The calculation was changed from a 30-day rolling average to an average over the course of an entire fermentation season. Additionally, the SCDP condition was reworded to allow the entire fermentation season to be included in the SCDP.

Following the issuance of ATC 15044 and ATC 15044-01, Wine Institute, a non-profit trade group representing wineries throughout California, filed third-party permit appeals of both permits. Their appeals challenged the validity of the achieved in practice determination contained in both permits. Wine Institute and the District were able to settle the permit appeals by limiting the achieved in practice determination to the class and category of fermentation tanks that the control systems have been successfully used on at CCWS. Specifically, the achieved in practice determination has been limited to closed-top fermentation tanks of up to 30,000 gallons in capacity. CCWS submitted a permit application to modify the permit to reflect this revision to the achieved in practice determination. This permit supersedes ATC 15044 and ATC 15044-01 in their entirety. Upon use, this permit will supersede PTO 14696.

1.2 Permit History:

PERMIT	FINAL ISSUED	PERMIT DESCRIPTION
ATC/PTO 12733	06/05/2009	Initial facility permit.
ATC/PTO Mod 12733-01	10/09/2009	Revise operational conditions.
ATC/PTO Mod 12733-02	09/08/2010	Revise emission and operational conditions.
Reeval 12733-R1	05/11/2012	Triennial permit renewal.
ATC 14257	09/23/2013	Installation of a single NoMoVo control system
PTO 14257	12/13/2013	Operating permit for the NoMoVo control system.
ATC 14350	07/28/2014	Installation for new tanks and control systems. Permit not used.
ATC Mod 14350-01	09/23/2014	Added barrel room to ATC 14350. Permit not used.
Reeval 12733 R2	06/25/2015	Triennial permit renewal.
ATC 14696	07/24/2015	Installation of EcoPAS capture control system.
PTO 14696	03/23/2016	Permit to Operate for ATC 14696.
ATC 15044	08/18/2017	Increased wine fermentation and emission limits, allow red wine fermentation in 400 series tanks, and construct new barrel room. BACT was triggered for this project.
ATC Mod 15044 - 01	09/15/2017	Modify performance standard averaging period.

1.3 Compliance History:

VIOLATION TYPE	NUMBER	ISSUE DATE	DESCRIPTION OF VIOLATION
NOV	9094	05/21/2008	Installation and operation of a winery without a permit.
NOV	9111	01/16/2009	Installation and operation of spark-ignited engines without a permit.
NOV	11141	05/02/2017	Exceeded daily ROC emissions.

2.0 ENGINEERING ANALYSIS

2.1 Equipment/Processes: Harvested grapes are trucked from the vineyards in bins containing between one quarter and five tons of fruit. The grapes are weighed and removed from the bins at the winery. Fruit is then processed through either a de-stemmer to remove the berries from the grape cluster stems or a grape press to extract the juice from the berries. Dates that grapes are received vary depending on weather and grape ripening conditions, but traditionally the harvest season is early September to mid-November.

The action of yeast, called fermentation, converts the grape juice to wine. Red wine is produced from the fermentation of whole grapes to allow the extraction of red pigment from the grape skins. White wine is produced through the fermentation of grape juice without the grape skins. Yeast activity converts the sugars in the juice to ethanol, and produces heat and CO_2 during the fermentation process. The wine fermentation process results in the release of ROC (mainly ethanol) and CO_2 emissions. The temperature of fermentation is controlled by the use of refrigeration. When fermentation is complete, wine is drained from the fermentation vessel and the grape skins are pressed to remove the remaining wine. The new wine is allowed to sit in tanks or barrels to allow the yeast to settle. The wine above the settled yeast is decanted (racked) off. Wine is stored in tanks or barrels to allow the development of flavors, and for further clarification and/or blending.

Grape skins and stems (pomace) are removed from the facility on a regular basis and are composted locally. The compost is returned to the vineyards as a natural product to nourish the grape vines.

2.2 Emission Controls: The ROC emissions from wine fermentation process are captured through the use of closed top fermentation tanks. The captured fermentation emissions are controlled by either a NoMoVo or EcoPAS capture and control system. Both the NoMoVo and EcoPAS systems use a piping manifold connected to the closed top fermentation tanks to capture and route fermentation exhaust gases to the control system. The release of gas from wine fermentation is used to drive the exhaust toward the control systems. No fans, motors or compressors are utilized to increase the manifold flow rates. The enclosed tanks at the facility are connected to a manifold via flex hoses. Each tank-to-manifold connection is equipped with a bypass valve, pressure relief valve, and mesh screen. All the manifold piping is slightly down sloped toward a NoMoVo or EcoPAS system. This downslope is designed to prevent any liquid traps in the piping manifold.

If being routed to a NoMoVo system, fermentation exhaust gases pass through a wet scrubber, which captures ethanol in a slurry tank. The exhaust gases are then released to the atmosphere. Prior to ethanol saturation, and at least once per day, the slurry is drained from the scrubber and shipped offsite to a District-approved facility for treatment or disposal. The NoMoVo system is guaranteed by the manufacturer to achieve a 67.5% (mass basis) capture and control efficiency, averaged over a complete fermentation batch cycle.

When routed to the EcoPAS system, the fermentation exhaust gases make multiple passes through a glycol chilled tube-in-shell condenser. Ethanol and water vapor condense due the decreased temperature. The condensate is collected in stainless steel vessels at three locations in the system. It is then shipped offsite to a District-approved facility for treatment or disposal. The EcoPAS system is guaranteed by the manufacturer to achieve a 67.0% (mass basis) capture and control efficiency in the last three quarters of a fermentation cycle and if the fermentation exhaust flow rate is between 50 and 300 scfm, and the system pressure does not exceed five inches of water column.

The emissions from the aging and storage of wine in oak barrels are uncontrolled.

2.3 Emission Factors: Emission factors are documented in the District's spreadsheet titled "*Winery Calculations (ver 2.4).xlsx*". Fermentation emissions are based on a 2005 reference from the California Air Resources Board. Oak barrel aging/storage losses are based on mass balance techniques developed by the District using an assumed annual wine loss rate (due to evaporation). Per the San Joaquin Valley United Air Pollution Control District RACT report on wineries, typical wine loss ranges from 1 to 5 percent. The District's default wine loss value is 3 percent.

2.4 Reasonable Worst Case Emission Scenario: Based on simultaneous red wine fermentation in all the tanks at the facility (1,438,226 gallons of capacity) and a combined capture and control efficiency of 67.0%, the controlled potential to emit of the facility is 420.37 pounds per day. However, the worst-case total daily emissions are limited to 174.98 pounds per day. This limit was selected since it is a 119.99 pounds per day potential to emit increase from the daily emissions limit found in PTO 14696. This potential to emit increase was selected by CCWS in order to not trigger the Air Quality Impact Analysis threshold of 120 pounds per day. Worst-case annual emissions are limited to 9.99 tons per year. Both the daily and annual emissions limits allow for a flexible combination of red wine fermentation and white wine fermentation as well as oak barrel wine aging and storage.

2.5 Emission Calculations: CCWS calculates daily and total annual fermentation and aging/storage emissions according to the District-approved *Monitoring, Recordkeeping, and Reporting Plan*. This method is used to more accurately calculate actual peak daily emissions. The fermentation and aging/storage emissions will be calculated using the District emission factors documented in Attachments A. CCWS will report daily and annual emissions according to the District-approved *Monitoring, Recordkeeping, and Reporting Plan.*

During active fermentation, CCWS obtains a sample from the NoMoVo system's dedicated sample port every 24 hours and analyzes the ethanol concentration via a portable density meter. Additionally, the permittee records the initial volume in each NoMoVo system's slurry tank every time fresh water is added as well as the final volume in the slurry tank every time the slurry is

drained. This information is used to calculate the mass of the daily captured and controlled ethanol using the equation presented in Attachment B.

CCWS measures the total volume of the captured condensate in the EcoPAS stainless steel collection vessels (Device ID: 388032) every 24 hours when any tank connected to the system is actively fermenting. A daily sample of the condensate is analyzed by a District-approved laboratory to determine the sample's ethanol content. These results are used calculate mass of the daily captured and controlled ethanol using the equation presented in Attachment B.

The uncontrolled emissions are calculated using the emission factors that are documented in the "*Winery Calculations (ver 2.4).xlsx*" spreadsheet. The daily controlled emissions are equal to the calculated uncontrolled emissions minus the daily mass of the captured and controlled ethanol.

2.6 Special Calculations: The permittee will calculate the combined capture and control efficiency over an entire fermentation season for the NoMoVo and EcoPAS systems using the equation below. Note that Day 1 is the first day of the fermentation season and Day n is the final day of the fermentation season.

$$CEE = \frac{(\sum_1^n C_{EcoPAS} + \sum_1^n C_{NoMoVo})}{\sum_1^n U} * 100$$

Where:

- CCE = Combined capture and control efficiency for the NoMoVo and EcoPAS systems over the entire fermentation season, %
- C_{EcoPAS} = EcoPAS systems' daily captured and controlled wine emissions, lbs
- C_{NoMoVo} = NoMoVo systems' daily captured and controlled wine emissions, lbs
- U = Daily uncontrolled wine emissions, lb
- n = Number of days in the fermentation season

2.7 BACT Analyses: This project triggers BACT for ROC since the uncontrolled potential to emit of the project exceeds the District's BACT threshold of 25 pounds per day. CCWS has proposed the NoMoVo and EcoPAS wine emission capture and control systems as BACT for this project. The NoMoVo system has been in operation at the facility since the 2013 fermentation season, and the EcoPAS system has been in operation at the facility since the 2015 fermentation system. Both systems have proven to reliably capture and control ethanol emissions from indoor closed-top wine fermentation tanks since being installed at CCWS.

In a letter to SJVAPCD, dated September 30, 2016, the U.S. EPA Region IX stated that they consider the control systems in use at CCWS to be achieved in practice control technologies for wine fermentation. In a follow-up letter to SJVAPCD, dated October 7, 2016, the U.S. EPA Region IX raised concerns that four winery permits proposed in their jurisdiction do not represent BACT. The District concurs that both control technologies are achieved in practice for closed-top wine fermentation tanks of up to 30,000 gallons in capacity. Section D.2.a of Rule 802 defines

BACT as "*The most effective emission control device, emission limit, or technique which has been achieved in practice for the type of equipment comprising such stationary source.*" Therefore, the District concludes that the proposed control technologies are achieved in practice BACT pursuant to our New Source Review Rule. Additionally, because wine fermentation tanks up to 30,000 gallons in capacity are similar in operational characteristics, this achieved in practice determination is applicable to closed-top fermentation tanks of up to 30,000 gallons in capacity.

The District's achieved in practice determination is consistent with the our Policy & Procedure 6100.064.2017 for making Nonattainment Review (NAR) BACT determinations. One essential aspect to classifying a control technology as achieved in practice is that the technology has a proven "track-record" of reliability. As noted above, both the NoMoVo and EcoPAS emission control systems have an established track record of reducing ROC emissions from indoor wine fermentation operations (in fact from the CCWS winery in particular). To document this proven track record, the District previously posted these emission capture and control systems used at CCWS to the California Air Resources Board's Best Available Control Technology (BACT) Clearinghouse. The database classifies both the NoMoVo and EcoPAS emission control devices "*Not yet a BACT Determination – Considered AIP*" (Achieved in Practice). Upon issuance of this ATC permit, the District will update these database entries to denote the classification as "achieved-in-practice BACT" for closed-top wine fermentation tanks of up to 30,000 gallons in capacity.

The District performed a thorough evaluation of the emission control technologies currently in use at wineries in Santa Barbara County. This analysis, revised June 1, 2018 and titled *Memorandum: Achieved in Practice Determination for Wine Fermentation Emission Control Technologies,* determined that the NoMoVo and EcoPAS capture and control systems meet our achieved in practice criteria for closed-top fermentation tanks of up to 30,000 gallons in capacity. This analysis may be found in Attachment E of this permit evaluation.

Both control systems have been guaranteed by their respective manufacturers to meet a combined capture and control efficiency of 67.0% over the course of a complete fermentation batch cycle. In order to minimize the monitoring, recordkeeping and reporting requirements, a combined capture and control efficiency for both systems is used for compliance purposes. Due to the varying nature of wine fermentation cycles and to minimize the impact of non-standard operations, the calculated collective capture and control efficiency will be averaged over an entire fermentation season.

Condition 6 of the permit requires the implementation of the BACT requirements list in Table 3 of the permit. BACT documentation for the NoMoVo and EcoPAS systems can be found in Attachment D of this evaluation. While the District only requires BACT to be installed for the 400 series tanks, CCWS has elected to install BACT on all the fermentation tanks at the facility to simplify their operations and allow for maximum operational flexibility.

2.8 Enforceable Operational Limits: The permit has enforceable operating conditions that ensure the equipment is operated properly. The permit limits total emissions from wine produced by fermentation and wine aged/stored in oak barrels for CCWS and AP operations. Total daily emissions are restricted to 174.98 pounds per day and total annual emissions are restricted to

9.99 tons per year. This permit requires the NoMoVo or EcoPAS system to capture and control emissions from all fermentation operations. In order to ensure the NoMoVo and EcoPAS systems are operated effectively, the permit requires the various system components to be vapor tight, inlet valves to be closed prior to opening a closed tank hatch or manway, and minimize periods when the closed tank hatch or manway is open. The time to perform non-standard operations including visual inspections, tank pump-overs, red wine cap breakups, delastage (rack and return), and wine additions are required to be minimized to the maximum extent possible. Lessee operations are not authorized by this permit.

2.9 Monitoring Requirements: Monitoring of the equipment's operational limits are required to ensure that these are enforceable. CCWS is required to track the amount of red and white wine produced by fermentation and aged/stored in oak barrels on a daily and annual basis. The permittee is also required to monitor operations associated with the NoMoVo and EcoPAS systems. CCWS is required follow the District-approved *Monitoring, Recordkeeping, and Reporting Plan* to track emissions and usage data. CCWS will monitor the AP activities to ensure that they provide accurate data and that their operations comply with this permit and District rules.

2.10 Recordkeeping and Reporting Requirements: The permit requires the data that is monitored to be recorded and reported to the District. CCWS will follow the District-approved *Monitoring, Recordkeeping, and Reporting Plan* to track daily wine fermentation and storage data, as well as the data necessary to quantify emission reductions from the NoMoVo and EcoPAS systems.

3.0 REEVALUATION REVIEW (not applicable)

4.0 REGULATORY REVIEW

4.1 Partial List of Applicable Rules:

Rule 201.	Permits Required
Rule 202.	Exemptions to Rule 201
Rule 205.	Standards for Granting Permits
Rule 301.	Circumvention
Rule 302.	Visible Emissions
Rule 303.	Nuisance
Rule 801.	New Source Review- Definitions and General Requirements
Rule 802.	New Source Review
Rule 809.	Federal Minor Source New Source Review
Rule 810.	Federal Prevention of Significant Deterioration

4.2 Rules Requiring Review:

4.2.1 *Rule 802 – New Source Review*: This rule applies to any applicant for a new or modified stationary source which emits or may emit any affected pollutant.

BACT - The BACT threshold is exceeded for ROC since the uncontrolled potential to emit of the project exceeds the Rule 802 threshold of 25 pounds per day. For this permit, all the operational

restrictions from the 400 series tanks have been removed. This change allows CCWS to ferment and store red or white wine in any of these tanks. The worst case scenario emissions for this project is the simultaneous fermentation of red wine in all the 400 series tanks. The daily uncontrolled potential to emit from these tanks under this permit is 499.48 pounds per day as documented in Attachment A. See Section 2.7 for a complete discussion regarding the BACT requirements.

AQIA - The Air Quality Impact Analysis (AQIA) requirements under Section F are not triggered for this project, as the permitted emissions increase is below the Rule 802 AQIA threshold of 120 pounds per day.

Offsets - Emission offsets per Section E are not triggered for this project, as the permitted emissions increase is below the Rule 802 offsets thresholds of 240 pounds per day and 25 tons per year.

5.0 AQIA

The project is not subject to the Air Quality Impact Analysis requirements of Regulation VIII.

6.0 OFFSETS/ERCs

6.1 Offsets: The emission offset thresholds of Regulation VIII are not exceeded.

6.2 ERCs: This source does not generate emission reduction credits.

7.0 AIR TOXICS

An air toxics health risk assessment was not required for this permitting action.

8.0 CEQA / LEAD AGENCY

The District is the lead agency under CEQA for this project, and has prepared a Notice of Exemption. Pursuant to Section 15061(b)(3) of the California Environmental Quality Act (CEQA) Guidelines, the proposed modifications authorized under this permit are exempt from CEQA because the project does not have the potential for causing a significant effect on the environment. Further, no cross-media impacts are projected. A copy of the final Notice of Exemption is filed with the Santa Barbara County Clerk of the Board.

9.0 SCHOOL NOTIFICATION

A school notice pursuant to the requirements of Health and Safety Code Section 42301.6 was not required.

10.0 PUBLIC and AGENCY NOTFICATION PROCESS/COMMENTS ON DRAFT PERMIT

10.1 This project was not subject to public notice.

10.2 A draft permit was not issued.

11.0 FEE DETERMINATION

Fees for the District's work efforts are assessed on a fee basis. The Project Code is *350150* (*Wineries*). See Attachment I for the fee calculations.

12.0 RECOMMENDATION

It is recommended that this permit be granted with the conditions as specified in the permit.

David Harris	June 2018		6/5/18
AQ Engineer/Technician	Date	Supervisor	Date

13.0 ATTACHMENT(S)

A. Project Potential to Emit Calculations
B. Controlled Emission Calculations
C. IDS Tables
D. BACT Documentation
E. Achieved in Practice Determination for Wine Fermentation Emission Control Technologies Memo
F. Facility Maps
G. Fee Statement

Authority to Construct 15044 - 02

ATTACHMENT A
Project Potential to Emit Calculations

Project Name: ATC 15044 - 400 Series Tanks Daily PTE
Date: May 16, 2017

ver 2.4

Daily Data Input

Input Data	Data	Units
400 Series Tanks Maximum Red Wine Fermented [1]	563,930	gallons (based on the total capacity of the 400 series tanks)
400 Series Tanks Maximum White Wine Fermented [1]	0	gallons
Fermentation Cycle - Red Wine	7	days
Fermentation Cycle - White Wine	15	days
Gal/Case =	2.378	
% Red Fermenting Daily =	30%	basis: District default
% White Fermenting Daily =	30%	basis: District default
% Red Oak Aging Daily =	40%	basis: District default
% White Oak Aging Daily =	25%	basis: District default

Notes:
1. Daily throughputs for fermentation shown in this table are included for the purposes of calculating the reasonable worst case emissions only. The permit limits total daily emissions instead of daily fermentation and aging throughputs in order to provide flexibility to CCWS.

Authority to Construct 15044 - 02

ATTACHMENT A
Project Potential to Emit Calculations

Project Name: ATC 15044 - 400 Series Tanks Daily PTE
Date: May 16, 2017

ver 2.4

District Wine Production Emission Factors

	Red	White	Units	Reference
Fermentation	6.20	2.50	lb/1000 gal	CARB, March 2005
Aging/Storage	27.83	25.83	lb/1000 gal-yr	District

Notes:

1. Aging emission factor based on % loss wine per year in oak cooperage.
2. ETOH = ethanol
3. Aging EF = (gal wine evap/gal wine) * (lb wine evap/gal wine evap) * (lb ETOH/lb wine evap) * 1000

SG ETOH =	0.79		MSDS
Density of Water =	8.34	lb/gal	standard
Density ETOH =	6.59	lb/gal	calculated
ETOH Vol % Red =	14.00%	gal/gal wine	assumption
ETOH Vol % White =	13.00%	gal/gal wine	assumption
ETOH Wt % Red =	11.40%	lb/lb wine	calculated
ETOH Wt % White =	10.56%	lb/lb wine	calculated
Density (Red Wine) =	8.14	lb/gal	calculated
Density (Wt Wine) =	8.16	lb/gal	calculated
% Wine Loss by Vol =	3.0%	gal/gal wine	District (loss of wine)

Notes:

- brown cells are calculations
- black cells are APCD default values

ATTACHMENT A
Project Potential to Emit Calculations

Project Name: ATC 15044 - 400 Series Tanks Daily PTE
Date: May 16, 2017

ver 2.4

400 Series Tanks Daily Wine Fermentation PTE (ethanol)

Process	Red Usage [3]	White Usage [3]	Usage Units	Red Wine Emission Factor	White Wine Emission Factor	Emission Factor Units
400 Series Tanks: Fermentation	563,930	0	gal/cycle	6.20	2.50	lb/1000 gal

Red Fermentation PTE (lb/day)	White Fermentation PTE (lb/day)	Total PTE (lb/day) [4]
499.48	0.00	***499.48***

Notes:

1. Brown cells are calculations
2. Dark blue cells are data fields from other sheets
3. Daily usage values for fermentation shown in this table are for calculation purposes only and do not represent enforceable usage values. The permit limits daily emissions only and does not contain daily usage limits.
4. The total daily emissions due to the fermentation process are equal to the daily white or red wine fermentation emissions and are not the sum of the daily red and white fermentation emissions. In order to provide flexibility to Central Coast Wine Services, this permit limits the total daily emissions to 174.98 lbs/day.

ATTACHMENT B
Controlled Emission Calculations

NoMoVo System

Mass balance over one cycle of NoMoVo system:

$$\Delta M = Vapor_{in} - Vapor_{out} - Slurry_{out}$$
$$\Delta M = M_f - M_i$$
$$where \quad M_f = V_f \times ETOH_f \times 6.6\frac{lb}{gal}$$
$$M_i = V_i \times ETOH_i \times 6.6\frac{lb}{gal}$$
$$\Rightarrow Vapor_{out} = Vapor_{in} - Slurry_{out} - \Delta M$$
$$\Theta\ Assume\ Slurry_{out} = 0$$
$$\Theta\ Assume\ V_f = V_i$$
$$\Theta\ \Delta M = M_f - M_i = (V_f \times ETOH_f - V_i \times ETOH_i) \times 6.6\frac{lb}{gal}$$
$$\therefore Vapor_{out} = Vapor_{in} - \left[V_f \times ETOH_f - V_f \times ETOH_f + V_f \times ETOH_f - V_i \times ETOH_i\right] \times 6.6\frac{lb}{gal}$$
$$= Vapor_{in} - V_i\left[ETOH_f - ETOH_i\right] \times 6.6\frac{lb}{gal}$$

The mass of vapor emitted each 24 hour period is calculated as:

$$Vapor_{out} = Vapor_{in} - V_i \times \left(ETOH_f - ETOH_i\right) \times 6.6\frac{lb}{gal}$$

Where: ΔM = change in mass of ethanol (lb)
$Vapor_{in}$ = mass of uncontrolled ethanol emissions into NoMoVo (lb)
$Vapor_{out}$ = mass of controlled ethanol emissions out of NoMoVo (lb)
$Slurry_{out}$ = mass of ethanol in NoMoVo slurry (lb)
M_f = final mass of ethanol (lb)
M_i = initial mass of ethanol (lb)
V_i = slurry volume at the beginning of the 24 hour period (gallons)
V_f = slurry volume at the end of the 24 hour period (gallons)
$ETOH_i$ = ethanol volume fraction at the beginning of the 24 hour period
$ETOH_f$ = ethanol volume fraction at the end of the 24 hour period
6.6 lb/gal = ethanol density

ATTACHMENT B
Controlled Emission Calculations

EcoPAS System

1. Record liquid volumes from external volume scale for all the condensate collection vessels:
   a. Pre, P
   b. Mid, M
   c. Final, F

2. Sum all three volumes, $\sum(P + M + F)$ = Total condensate volume, V in gallons

3. Calculate volume fraction for each vessel:
   a. P/V x 100 = P_f
   b. M/V x 100 = M_f
   c. F/V x 100 = F_f

4. Note that $P_f + M_f + F_f = 100$

5. A single sample of condensate for laboratory analysis will be used by filling a 100 ml graduated cylinder, or other sample vessel with:

   $\sum(Pf + Mf + Ff)$

   Where each volume is measured in mL (Note: if the laboratory requires a larger volume each measurement can be scaled linearly).

6. Measurement of EtOH captured by EcoPAS system calculated from the percent EtOH measured by the laboratory and the total volume from the condensate collection vessels:

   EtOH captured = % $EtOH_{Vinquiry}$ x V x 6.6 lb/gal

ATTACHMENT C
IDS Tables

PERMIT POTENTIAL TO EMIT

	NO_x	ROC	CO	SO_x	PM	PM_{10}	$PM_{2.5}$
lb/day		174.98					
lb/hr							
TPQ							
TPY		9.99					

FACILITY POTENTIAL TO EMIT

	NO_x	ROC	CO	SO_x	PM	PM_{10}	$PM_{2.5}$
lb/day		174.98					
lb/hr							
TPQ							
TPY		9.99					

STATIONARY SOURCE POTENTIAL TO EMIT

	NO_x	ROC	CO	SO_x	PM	PM_{10}	$PM_{2.5}$
lb/day		174.98					
lb/hr							
TPQ							
TPY		9.99					

Notes:
(1) Emissions in these tables are from IDS.
(2) Because of rounding, values in these tables shown as 0.00 are less than 0.005, but greater than zero.

Authority to Construct 15044 - 02

ATTACHMENT D
BACT Determination

ENGINEERING EVALUATION BACT DISCUSSION LIST- NoMoVo System

1. Pollutant(s): ROC

2. Emission Points: Wine Fermentation Tanks: Closed-Top ≤ 30,000 gallons

3. BACT Determination Summary:

   Technology: NoMoVo Wet Scrubber Ethanol Capture and Control System

   Performance Standard: Collective facility-wide capture and control efficiency of 67.0% (mass basis) over an entire fermentation season.

4. Level of Stringency: [x] Achieved in Practice
   [ ] Technologically Feasible
   [ ] RACT, BARCT, NSPS, NESHAPS, MACT

5. BACT Selection Process Discussion: The applicant has successfully operated a NoMoVo system at the facility for four fermentation seasons and has established a proven "track-record" of reliability. The District has determined that the NoMoVo emissions control system is an achieved-in-practice BACT technology for closed-top wine fermentation tanks less than or equal to 30,000 gallons in capacity. Additionally, the USEPA has determined that the NoMoVo capture and control system is considered an achieved-in-practice control technology for wine fermentation. This BACT determination was based on the application materials, the manufacturer's capture and control efficiency guarantee, and prior operational history of these controls at the CCWS facility.

6. BACT Effectiveness: BACT is expected to be effective over the course of a complete fermentation cycle.

7. BACT During Non-Standard Operations: Non-standard operations identified by the applicant are winemaking operations that require the closed tank hatches or manways to be opened. These activities include visual inspections, tank pump-overs, red wine cap breakups, delastage, and wine additions. The time taken to complete these activities shall be minimized per the permit conditions. BACT is not feasible during these non-standard operations since the manifold inlet valve shall be closed prior to commencing these activities. Additionally, BACT is not feasible during tank foam-overs.

8. Operating Constraints: A NoMoVo (or EcoPAS) system must be used to capture and control emissions from all fermentation operations in the tanks subject to this permit. Collectively, the systems must achieve a minimum capture and control efficiency greater than or equal to 67.0% (mass basis) over an entire fermentation season. All manifold piping shall be vapor tight and slope downward to the control system. All slurry drained from a NoMoVo system must be disposed or treated in a District-approved method.

ATTACHMENT D
BACT Determination

9. Continuously Monitored BACT: CEMS are not required for this project.

10. Source Testing Requirement: There are no source testing requirements for this capture and control equipment. The capture and control efficiency of the NoMoVo system shall be determined using a mass balance approach. Specifically, the amount of ethanol captured and controlled each day will be determined through analysis of the slurry at the end of each 24 hour period. The total daily uncontrolled ethanol emissions will be calculated using District-approved emission factors and calculation methodologies. The daily uncontrolled emissions and amount of ethanol captured will be used to calculate the daily control efficiency. The daily control efficiencies will be averaged over an entire fermentation season to determine compliance with the BACT performance standard.

11. Compliance Averaging Times: The capture and control efficiency shall be based on an entire fermentation season.

12. Multi-Phase Projects: This is not a multi-phase project.

13. Referenced Sources: The following sources were reviewed to determine BACT: Application material; NoMoVo manufacturer's capture and control efficiency guarantee; SBCAPCD *Achieved in Practice Determination for Wine Fermentation Emission Control Technologies* Memo (revised June 1, 2018); U.S. EPA Region 9 letter to SJVAPCD regarding Bear Creek Winery, CBUS Ops Inc., Delicato Vineyard, and E&J Gallo Winery projects, September 30, 2016; CARB BACT Clearinghouse.

14. PSD BACT: Not Applicable

Authority to Construct 15044 - 02

ATTACHMENT D
BACT Documentation

ENGINEERING EVALUATION BACT DISCUSSION LIST- EcoPAS System

1. Pollutant(s): ROC

2. Emission Points: Wine Fermentation Tanks: Closed-Top ≤ 30,000 gallons

3. BACT Determination Summary:

   Technology: EcoPAS Chiller Condenser Ethanol Capture and Control System

   Performance Standard: Collective facility-wide capture and control efficiency of 67.0% (mass basis) over an entire fermentation season.

4. Level of Stringency: [x] Achieved in Practice
   [ ] Technologically Feasible
   [ ] RACT, BARCT, NSPS, NESHAPS, MACT

5. BACT Selection Process Discussion: The applicant has successfully operated an EcoPAS system at the facility for two fermentation seasons and has established a proven "track-record" of reliability. The District has determined that the EcoPAS emissions control system is an achieved-in-practice BACT technology closed-top wine fermentation tanks less than or equal to 30,000 gallons in capacity. Additionally, the USEPA has determined that the EcoPAS capture and control system is considered an achieved-in-practice control technology for wine fermentation. This BACT determination was based on the application materials, the manufacturer's capture and control efficiency guarantee, and prior operational history of these controls at the CCWS facility.

6. BACT Effectiveness: BACT is expected to be effective if the fermentation exhaust flow rate is between 50 and 300 scfm and the pressure in the system does not exceed 5" of water column. Additionally, the manufacturer does not provide a performance guarantee during the first quarter of a fermentation cycle due to the chemical composition of the fermentation exhaust gases during this time. In order to address these specifications, BACT effectiveness will be determined over an entire fermentation season.

7. BACT During Non-Standard Operations: Non-standard operations identified by the applicant are winemaking operations that require the closed tank hatches or manways to be opened. These activities include visual inspections, tank pump-overs, red wine cap breakups, delastage, and wine additions. The time taken to complete these activities shall be minimized per the permit conditions. BACT is not feasible during these non-standard operations since the manifold inlet valve shall be closed prior to commencing these activities. Additionally, BACT is not feasible during tank foam-overs.

ATTACHMENT D
BACT Determination

8. Operating Constraints: An EcoPAS (or NoMoVo) system must be used to capture and control emissions from all fermentation operations in the tanks subject to this permit. Collectively, the systems must achieve a minimum capture and control efficiency greater than or equal to 67.0% (mass basis) over an entire fermentation season. All manifold piping shall be vapor tight and slope downward to the control system. All condensate collected from an EcoPAS system must be disposed or treated in a District-approved method.

9. Continuously Monitored BACT: CEMS are not required for this project.

10. Source Testing Requirement: There are no source testing requirements for this capture and control equipment. The capture and control efficiency of the EcoPAS system shall be determined using a mass balance approach. Specifically, the amount of ethanol captured and controlled each day will be determined through analysis of the condensate at the end of each 24 hour period. The total daily uncontrolled ethanol emissions will be calculated using District-approved emission factors and calculation methodologies. The daily uncontrolled emissions and amount of ethanol captured will be used to calculate the daily control efficiency. The daily control efficiencies will be averaged over an entire fermentation season to determine compliance with the BACT performance standard.

11. Compliance Averaging Times: The capture and control efficiency shall be based on an entire fermentation season.

12. Multi-Phase Projects: This is not a multi-year project.

13. Referenced Sources: The following sources were reviewed to determine BACT: Application material; EcoPAS manufacturer's capture and control efficiency guarantee; SBCAPCD *Achieved in Practice Determination for Wine Fermentation Emission Control Technologies* Memo (revised June 1, 2018); US EPA Region 9 letter to SJVAPCD regarding Bear Creek Winery, CBUS Ops Inc., Delicato Vineyard, and E&J Gallo Winery projects, September 30, 2016; CARB BACT Clearinghouse.

14. PSD BACT: Not Applicable

ATTACHMENT E
Achieved in Practice Determination for Wine Fermentation Emission Control Technologies Memo

Our Vision Clean Air

Santa Barbara County
Air Pollution Control District

MEMORANDUM

TO: Michael Goldman, Manager, Engineering Division
FROM: David Harris, Supervisor, Engineering Division
SUBJECT: Achieved in Practice Determination for Wine Fermentation Emission Control Technologies
DATE: August 18, 2017
Revised June 1, 2018

Summary:

This memo provides the Santa Barbara County Air Pollution Control District's (District's) analysis of the achieved in practice status of wine fermentation emission control technologies[1] currently in use in Santa Barbara County. As of the date of this memo, the packed bed scrubber system in use at Terravant Wine Company is achieved in practice emission control technology for indoor wine fermentation operations at new wineries, and the NoMoVo and EcoPAS control systems in use at Central Coast Wine Services are achieved in practice emission control technologies for closed-top wine fermentation tanks 30,000 gallons in capacity or less.

Background:

The wine fermentation process results in the release of reactive organic compound (ROC) (mainly ethanol) emissions. New wineries and modifications to existing wineries with an ROC potential to emit of 25 pounds per day or more trigger the nonattainment review (NAR) Best Available Control Technology (BACT) requirements of Rule 802. Rule 802.D.2 defines NAR BACT as the more stringent of:

a. The most effective emission control device, emission limit, or technique which has been achieved in practice for the type of equipment comprising such stationary source; or

b. The most stringent limitation contained in any State Implementation Plan; or

c. Any other emission control device or technique determined after public hearing to be technologically feasible and cost-effective by the Control Officer.

In April 2017, Central Coast Wine Services (CCWS) submitted an Authority to Construct permit application (ATC 15044) to remove operational restrictions and authorize the fermentation of red and white wines in all of their previously installed 400 series tanks. The potential to emit of this project exceeded the 25 pound per day NAR BACT threshold, therefore BACT was triggered for this project. In

[1] As used throughout this document, the term "emission control system" refers to both the emission capture and emission control functionality of the system.

ATTACHMENT E
Achieved in Practice Determination for Wine Fermentation Emission Control Technologies Memo

light of this permit application, the question has arisen as to whether any of the emission control systems currently in use at wineries in Santa Barbara County have been achieved in practice. The purpose of this memo is to analyze the achieved in practice status of each emission control technology currently in use at wineries in Santa Barbara County.

Most Effective Control Achieved in Practice Definition:

District Policy and Procedure No. 6100.064.2017 *Best Available Control Technology* provides the following guidance on the definition of the "most effective emission control device, emission limit, or technique that has been achieved in practice for the type of equipment comprising such stationary source":

> Most Effective Control Achieved in Practice: There are three important elements to this part of the definition. The first element refers to the *most effective control device, technique, or emission limit.* This element is defined in a broad fashion to allow for the appropriate selection criteria for the specific equipment or process in question. Examples include:
>
> - Concentration limits of 5 ppmv NOx from the stack of a small boiler using a low-NOx burner
> - Mass destruction rate efficiency of 98.0 percent for a regenerative thermal oxidizer
> - Selective catalytic reduction with a concentration limit of 2 ppmv NOx for a 10 MW combined-cycle/cogeneration combustion gas turbine.
>
> The second element is achieved-in-practice. This element indicates that the technology has a proven "track-record" of reliability. For example, take a biogas fired spark ignited IC engine using SCR controls located at Facility X. This engine meets an emission standard of 9 ppmvd (at 15% O_2) and has done so for a reasonable time period. Next, if Facility Z (in our jurisdiction) triggers BACT for a similar proposed project, then it would need to meet this achieved-in-practice BACT standard. Facility X could be located anywhere in the USA.
>
> The third element of the definition refers to the type of equipment comprising the stationary source (i.e., class or category of source). This could be as large as a group of basic equipment units that provide the same function (e.g., the combination of motors, turbines, or reciprocating engines to provide torsional drive). On the other hand, it could be a more specific size segment or subtype within an equipment type (e.g., boilers over 33 MMBtu/hr heat input, or lean-burn engines).

This analysis will focus on the second element, "achieved in practice," of the definition discussed above. The emission control technologies being analyzed comprise the first element, and wine fermentation tanks comprise the third element of the definition. The term "achieved in practice" is not defined in federal, state or District rules or regulations. District Policy and Procedure No. 6100.064.2017 defines achieved in practice as a "proven 'track-record' of reliability." To determine if a control device has a proven track-record of reliability, the historical operations of the equipment must be evaluated. This analysis includes the frequency and duration of equipment operation, as well as the track-record of the equipment to successfully achieve its intended purpose (i.e. control ethanol emissions from wine fermentation). It is also important to note that the guidance in District Policy and Procedure No. 6100.064.2017 only considers whether an emission control technology has been operated successfully at a source for a reasonable period of time. This policy does not require a technology to have been installed to meet an NAR BACT requirement in order to be defined as achieved in practice.

In an August 25, 1997 letter from David Howekamp of the U.S. Environmental Protection Agency (EPA), Region IX to Mohsen Nazemi of the South Coast Air Quality Management District (SCAQMD), the U.S. EPA established a position that the successful operation of a new control technology for six months

ATTACHMENT E
Achieved in Practice Determination for Wine Fermentation Emission Control Technologies Memo

constitutes achieved in practice. Due to the seasonal nature of the winemaking industry, fermentation activities only occur for approximately 60 to 80 days per year. Therefore, the EPA six month criteria must be adjusted to reflect the seasonality of the source type. In this case, the District believes the successful operation of the control equipment for at least one full fermentation season to be an appropriate criterion to demonstrate a technology has been achieved in practice. For equipment that is not operated continuously, the cumulative operation of the equipment for at least 80 days (one full fermentation season) is appropriate.

Finally, the "achieved-in-practice" component of the NAR BACT definition only considers the most stringent control achieved in practice for the category of source being considered. Thus, no discussion of costs is necessary or appropriate for sources that are already using a level of control considered achieved in practice. The fact that a particular control technology is achieved in practice implies its inherent economic feasibility. Since the technologies evaluated by this memo are already installed and in use at wineries in Santa Barbara County, cost is not evaluated in this analysis.

Achieved In Practice Analysis:

The following analysis evaluates the achieved in practice status of each wine fermentation emission control technology currently in use in Santa Barbara County.

1. Packed Bed Scrubber Technology - Terravant Wine Company:
   Terravant Wine Company (Terravant) provides custom winemaking services to the wine industry. Red and white wine grapes are crushed, fermented and stored at the facility, located at 35 Industrial Parkway in Buellton. Authority to Construct (ATC) 12364 was issued for the facility on February 21, 2008, and the facility began operations in fall 2008. Potential emissions from the new winery triggered BACT requirements for the project, however the District determined that BACT, while technically feasible for the new facility, was not cost effective. Due to other regulatory demands (e.g., offsets), the applicant moved forward with the design and installation of an emission control system.

   A packed bed scrubber emission control system was designed to control ethanol emissions to the atmosphere during the wine fermentation process. All of the fermentation tanks are indoors at Terravant, located within a temperature controlled building. An active ventilation system, utilizing ducting and blowers, continuously evacuates the air from the fermentation room and two additional storage rooms and routes the airflow to the control system. The building design has fast opening and closing doors to ensure that the rooms are maintained at a negative pressure. The ethanol emissions from wine fermentation and storage activities are routed to a packed bed scrubber control device. Scrubbing liquid, in this case water, is introduced at the top of the scrubber and flows down through the packed bed tower. Ethanol is absorbed into the scrubbing liquid due to ethanol's affinity to water. Once absorbed in the water, the ethanol is oxidized to carbon dioxide and water chemically using hydrogen peroxide. To oxidize the ethanol completely and rapidly, the liquid is passed through a UV reactor to speed the oxidation process. The operating permit for the facility requires the packed bed scrubber emission control system to be operated at all times during wine fermentation activities.

   While the packed bed scrubber control system at the Terravant winery is a custom system designed specifically for the facility, the system is comprised of components that are commercially available "off the shelf" (e.g. packed bed scrubber tower, tanks, pumps, UV lamp, etc.). Packed bed scrubbers are widely used to control ROC emissions throughout many industries. The vendor that designed the Terravant control system, or any other vendor familiar with the design of packed bed

scrubber control systems, would be able to design and build a similar control system for another winery.

ATC 12364 required the packed bed scrubber system to achieve a 95% control efficiency. Initial inlet/outlet source testing of the control system during the 2008 fermentation season showed the system was only achieving a 64% control efficiency. At the request of Terravant, the Permit to Operate (PTO) for the control system lowered the control efficiency requirement to 75%. The packed bed scrubber control system was subsequently re-engineered, and a source test during the 2009 fermentation season showed the control system achieved 91% control efficiency. The control system failed to meet the 75% control efficiency requirement during the 2011 – 2014 fermentation seasons. The lowest achieved control efficiency of the system was 47.6% during the 2013 fermentation season. Terravant and the control system vendor attributed the performance issues to improper maintenance of the system during times of non-operation between fermentation seasons.

In the spring of 2015, Terravant applied to modify their permit to eliminate the red and white wine production limits, increase the wine fermentation and aging ROC emission limits, and eliminate the minimum required scrubber control efficiency. This permit included daily recordkeeping requirements and biannual source testing requirements to demonstrate compliance with the daily emission limits. Terravant also implemented an enhanced control system maintenance program during this time. Since that permit was issued, four inlet/outlet source tests conducted during the 2015 and 2016 fermentation seasons have shown the system to achieve 83.7%, 86.3%, 80.9% and 83.5% control efficiencies, respectively. Looking at all eight years of source test data, the system has always achieved control of wine fermentation emissions at the Terravant facility. After improvements to the maintenance program, the control system has demonstrated two full fermentation seasons of reliable and consistent emission control.

In summary, the packed bed scrubber emission control system has been successfully operated to control wine fermentation emissions at the Terravant facility for eight full fermentation seasons. While the control system experienced issues related to maintenance during the initial years of operation, these issues have been addressed, and the control system has achieved an average control efficiency of 83.6% during the most recent two full fermentation seasons. Based on this analysis, it is clear that the Terravant packed bed scrubber control system has achieved a proven track-record of reliability for controlling ethanol emissions from wine fermentation. Therefore, the control system is designated achieved in practice emission control technology for indoor wine fermentation operations at new wineries. Since the building housing the wine fermentation activities must be able to accommodate the active ventilation system that collects vapors for the packed bed scrubber, this system may not be technically feasible at existing wineries.

2. NoMoVo Technology - Central Coast Wine Services:

Central Coast Wine Services (CCWS) provides custom winemaking services to the wine industry. Red and white wine grapes are crushed, fermented and stored at the facility, located at 2717 Aviation Way in Santa Maria. The facility was constructed and operated without a District permit, and Authority to Construct/ Permit to Operate 12733 was issued on June 5, 2009 to bring the facility into compliance with District rules and regulations. Potential emissions from the winery triggered BACT requirements for the project, however the District determined that BACT, while technically feasible for the new facility, was not cost effective. The winery operated for several years with emission limits set just below offset thresholds and implemented daily recordkeeping requirements to ensure the emission limits were not exceeded. In August 2013, CCWS submitted an application to voluntarily install and operate the NoMoVo emission capture and control system

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at their winemaking facility as needed to maintain emissions below the permitted limits. An ATC permit for the control system was issued on September 23, 2013, and the system was installed and operated as necessary for the remainder of the 2013 fermentation season. A second NoMoVo system was permitted in 2014 and installed prior to the 2015 fermentation season.

CCWS has 143 closed-top wine fermentation tanks at their facility, ranging in size from 450 gallons to 21,232 gallons in capacity. The NoMoVo system has not been used on tanks less than 1,100 gallons in size at CCWS and, because the District did not do and is not required to do a technical feasibility and cost effectiveness analysis for any part of the "achieved in practice" determination for the CCWS project subject to BACT, such an analysis has not been done for these tanks. All of the fermentation tanks are indoors at CCWS, located within a temperature controlled building, with tanks equipped with glycol jackets for additional temperature control.

The NoMoVo system uses a piping manifold connected to closed-top fermentation tanks to capture and route fermentation exhaust gases to the control system. The system is entirely passive, whereby the release of gas from wine fermentation is used to drive the exhaust toward the control system. In the NoMoVo control system, fermentation exhaust gases pass through a wet scrubber, which absorbs ethanol in water that is recirculated countercurrent through the system. The cleaned exhaust gases are then released to the atmosphere. Prior to ethanol saturation, and at least once per day, the ethanol/water slurry is drained from the scrubber and shipped offsite in an airtight container to a District-approved facility for treatment or disposal. Each NoMoVo control system is capable of being connected to and controlling several fermentation tanks at one time.

The NoMoVo system has been in use at the CCWS facility for one partial fermentation season (2013) and three full fermentation seasons (2014 – 2016) on an as-needed basis. During the three full seasons of operation, the NoMoVo system was operated for 147 cumulative days out of the 223 days of wine fermentation activities (67%). Historically, the NoMoVo system was not operated during the beginning and end of the fermentation season, when wine fermentation volumes were lower and the use of emission controls was not necessary to comply with the daily emission limits. Excluding the days before the system was first operated each season and the days after the system was last operated each season, the NoMoVo system operated on 147 of 151 days (97%). Additionally, the NoMoVo system was operated for 30 consecutive days in 2014, 47 consecutive days in 2015, and 37 consecutive days in 2016 at the CCWS facility. The cumulative usage of the NoMoVo system at the CCWS facility meets the District's 80 cumulative days of operation criteria for qualifying the technology as achieved in practice. Moreover, the historical system usage demonstrates a clear track-record of frequent operation, with near continuous operation during the bulk of each fermentation season.

Due to the nature of operation of the NoMoVo system, the amount of ethanol captured and controlled by the system can readily be determined by measuring the ethanol content and volume of the NoMoVo slurry. The operating permit for CCWS requires the NoMoVo slurry to be measured for ethanol content and volume, and replaced with fresh water on a daily basis. A review of the annual reports from CCWS show that each NoMoVo system successfully captured and controlled ethanol emissions from wine fermentation on every day they were operated. During the three full seasons of operation, the NoMoVo systems captured and controlled 3,849 pounds of ethanol that would have otherwise been emitted to the atmosphere. Based on this operational data, the NoMoVo systems achieved an average of 26.2 pounds of ethanol capture and control per day. This data shows the NoMoVo system has positively achieved the control of ethanol emissions from wine fermentation operations.

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In summary, the NoMoVo emission control system has been successfully operated to control wine fermentation emissions indoors at the CCWS facility for three full fermentation seasons. The control system has been operated on a frequent basis, with nearly continuous operation during the majority of fermentation operations. When the control systems were operated, they achieved an average of 26.2 pounds of ethanol capture and control per day. Based on this information, the NoMoVo control system has achieved a proven track record of reliability for controlling ethanol emissions from wine fermentation indoors. Therefore, the NoMoVo control system is considered achieved in practice emission control technology for closed-top wine fermentation tanks. Additionally, because wine fermentation tanks up to 30,000 gallons in capacity are similar in operational characteristics, this achieved in practice determination is applicable to closed-top fermentation tanks of up to 30,000 gallons in capacity.

3. EcoPAS Technology - Central Coast Wine Services:
On July 24, 2015, CCWS was issued an ATC permit to install and operate the EcoPAS emission control system to control emissions from the 400 series fermentation tanks on an as-needed basis. The control equipment was installed in August 2015 and was operated on an as-needed basis for the 2015 and 2016 fermentation seasons.

CCWS has 143 closed-top wine fermentation tanks at their facility, ranging in size from 450 gallons to 21,232 gallons in capacity. The EcoPAS system has not been used on tanks less than 1,100 gallons in size at CCWS and, because the District did not do and is not required to do a technical feasibility and cost effectiveness analysis for any part of the "achieved in practice" determination for the CCWS project subject to BACT, such an analysis has not been done for these tanks. All of the fermentation tanks are indoors at CCWS, located within a temperature controlled building, with tanks equipped with glycol jackets for additional temperature control.

The EcoPAS system uses a piping manifold connected to closed-top fermentation tanks to capture and route fermentation exhaust gases to the control system. The system is entirely passive, whereby the release of gas from wine fermentation is used to drive the exhaust toward the control system. In the EcoPAS control system, the fermentation exhaust gases make multiple passes through a glycol chilled tube-in-shell condenser. Ethanol and water vapors in the exhaust gases condense into liquid phase due the decreased temperature. The condensate is collected in airtight stainless steel vessels at three locations in the system. The condensate is stored onsite and then shipped offsite to a District-approved facility for treatment or disposal. The EcoPAS control system is capable of being connected to and controlling several fermentation tanks at one time.

The EcoPAS system has been in use at the CCWS facility for two full fermentation seasons (2015 – 2016) on an as-needed basis. During the two seasons of operation, the EcoPAS system was operated on 108 cumulative days out of the 145 days of wine fermentation activities (74%). Historically, the EcoPAS system was not operated during the beginning and end of the fermentation season, when wine fermentation volumes were lower and the use of emission controls was not necessary to comply with the daily emission limits. Excluding the days before the system was first operated each season, and the days after the system was last operated each season, the EcoPAS system was operated on 108 of 117 days (92%). Additionally, the EcoPAS system was operated for 34 consecutive days in 2015 and 37 consecutive days in 2016 at the CCWS facility. The cumulative usage of the EcoPAS system at the CCWS facility meets the District's 80 cumulative days of operation criteria for qualifying the technology as achieved in practice. Moreover, the

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historical system usage demonstrates a clear track-record of frequent operation, with near continuous operation during the bulk of each fermentation season.

Due to the nature of operation of the EcoPAS system, the amount of ethanol captured and controlled by the system can be readily determined by measuring the ethanol content and volume of the EcoPAS condensate. The operating permit for CCWS requires the EcoPAS condensate be measured for ethanol content and volume on a daily basis. A review of the annual reports from CCWS show that the EcoPAS system successfully captured and controlled ethanol emissions from wine fermentation on every day that is was operated. During the two seasons of operation, the EcoPAS system captured and controlled 501 pounds of ethanol that would have otherwise been emitted to the atmosphere. Based on this operational data, the EcoPAS system achieved an average of 4.6 pounds of ethanol capture and control per day. This data shows the EcoPAS system has positively achieved the control of ethanol emissions from wine fermentation operations at CCWS.

It is important to note that the EcoPAS system was only connected to series 400 tanks used for white wine fermentation during the 2015 and 2016 seasons. Ethanol emissions from white wine fermentation are approximately 60% lower than ethanol emissions from red wine fermentation (2.5 lb/1000 gallon vs. 6.2 lb/1000 gallon). The EcoPAS system would be expected to capture and control more ethanol if connected to tanks used for red wine fermentation.

In summary, the EcoPAS emission control system has been successfully operated to control wine fermentation emissions indoors at the CCWS facility for two full fermentation seasons. The control system has been operated on a frequent basis, with nearly continuous operation during the majority of fermentation operations. When the control system was operated, it system achieved an average of 4.6 pounds of ethanol capture and control per day. Based on this information, the EcoPAS control system has achieved a proven track record of reliability for controlling ethanol emissions from wine fermentation indoors. Therefore, the EcoPAS control system is considered achieved in practice emission control technology for closed-top wine fermentation tanks . Additionally, because wine fermentation tanks up to 30,000 gallons in capacity are similar in operational characteristics, this achieved in practice determination is applicable to closed-top fermentation tanks of up to 30,000 gallons in capacity.

Oversight Agency Input:

On September 30, 2016, the U.S. EPA Region IX sent a letter to the San Joaquin Valley Air Pollution Control District (SJVAPCD) providing comments on four proposed winery permitting actions within the SJVAPCD jurisdiction. These permitting actions triggered BACT requirements under SJVAPCD's new source review regulations. SJVAPCD's BACT requirements are essentially equivalent to the federal requirements for Lowest Achievable Emission Rate (LAER). In their letter, the U.S. EPA states: "EPA believes the District's analyses for the four proposed permits identified above do not satisfactorily demonstrate LAER. Please see Enclosures 1 and 2 for more details. Consequently, EPA believes the District's proposed permits do not implement LAER as required by Rule 2201."

Enclosure 1 of the U.S. EPA's September 30, 2016 letter includes the following comments regarding the achieved in practice status of the emission control technologies in use in Santa Barbara County:

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> "The fact that the source was not required to achieve emission reductions to satisfy a new source review (NSR) requirement and instead used the controls to avoid an applicable requirement, does not factor into the evaluation of whether a specific emission reduction rate has been achieved in practice."
>
> "EPA has reviewed the records from CCWS regarding their wine fermentation operations and using mass balance calculations have determined that the use of add-on controls during portions of the fermentation process have resulted in emission reductions of 76.6%. The demonstrated use of add-on controls to reduce emissions by 76.6% represents the lowest achievable emission rate for wine fermentation operations."
>
> "The Terravant Winery was issued a permit to construct and operate a packed bed water scrubber in 2008 to control emissions from their wine fermentation operations… The facility has been able to achieve a minimum control efficiency of at least 47.6% over the seven seasons it has been in use. Therefore, for wine fermentation tanks, EPA believes that the lowest achievable emission rate which has been AIP, based on the demonstrated emission reductions achieved at the Terravant facility, is a 47.6% control efficiency, as measured by Santa Barbara County APCD source testing."

Based on these comments, it is clear that the U.S. EPA considers the three technologies analyzed in this memo to be achieved in practice emission control technologies for wine fermentation. The comments also support the guidance from District Policy and Procedure No. 6100.064.2017 that an emission control technology does not need to have been a previous NAR BACT requirement to be achieved in practice. These determinations made by the U.S. EPA, an oversight agency of the District, are in agreement with the determinations made by this memo.

Conclusion:

Based on the above analyses and oversight agency input, the packed bed scrubber system in use at Terravant Wine Company is achieved in practice emission control technology for indoor wine fermentation operations at new wineries, and the NoMoVo and EcoPAS control systems in use at Central Coast Wine Services are achieved in practice emission control technologies for closed-top wine fermentation tanks 30,000 gallons in capacity or less.

Attachments:

1. Terravant Packed Bed Scrubber Pictures
2. Terravant Packed Bed Scrubber 2015 - 2016 Source Test Results
3. NoMoVo Pictures
4. EcoPAS Pictures
5. CCWS Control System Operation Calendars
6. September 30, 2016 U.S. EPA Letter to SJVAPCD

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Attachment 1 – Terravant Packed Bed Scrubber Pictures

Packed bed scrubber

Packed bed scrubber and UV treatment lamp

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Attachment 1 – Terravant Packed Bed Scrubber Pictures

Packed bed scrubber blower

Packed bed scrubber control panel

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Attachment 1 – Terravant Packed Bed Scrubber Pictures

Wine fermentation tanks and fermentation room ventilation ducting

Wine fermentation tanks and fermentation room ventilation ducting

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Attachment 2 – Terravant Source Test Results

Terravant Winery
Buellton Facility ID 10918
Inlet & Outlet

Project 228-9302A
September 4, 2015

Pollutant	ppmv	lb/hr	lb/day	tons/year	Permit Limits
ROC	23.98	1.44	34.63		
Scrubber	25.99	1.56	37.50		
Outlet	24.41	1.45	34.69		54.53 lb/day
Mean	**24.79**	**1.48**	**35.60**	**1.77**	**9.89 tons/year**
Ethanol	20.00	1.19	28.59		
Scrubber	22.17	1.33	31.83		
Outlet	20.83	1.23	29.59		
Mean	**21.00**	**1.25**	**30.00**		
Ethanol	162.79	9.70	232.73		
Scrubber	138.85	8.31	199.34		
Inlet	101.45	6.00	144.09		
Mean	**134.36**	**8.00**	**192.05**		
	Inlet lb/hr	Outlet lb/hr		% Removal	
Ethanol	9.70	1.10		87.7	
Scrubber	8.31	1.33		84.0	
Efficiency	6.00	1.23		79.5	
Mean	**8.00**	**1.25**		**83.7**	

Terravant Winery
Lompoc Facility
Inlet & Outlet

Project 228-9302B
September 25, 2015

Pollutant	ppmv	lb/hr	lb/day	tons/year	Permit Limits
ROC	33.23	2.06	49.40		
Scrubber	34.42	2.03	48.75		
Outlet	33.60	2.02	48.44		54.53 lb/day
Mean	**33.75**	**2.04**	**48.87**	**2.31**	**9.89 tons/year**
Ethanol	27.36	1.59	38.13		
Scrubber	30.88	1.81	43.33		
Outlet	29.99	1.77	42.47		
Mean	**29.41**	**1.72**	**41.31**		
Ethanol	231.06	13.42	321.97		
Scrubber	212.47	12.42	298.11		
Inlet	202.17	11.93	286.29		
Mean	**215.23**	**12.59**	**302.12**		
	Inlet lb/hr	Outlet lb/hr		% Removal	
Ethanol	13.42	1.59		88.2	
Scrubber	12.42	1.81		85.5	
Efficiency	11.93	1.77		85.2	
Mean	**12.59**	**1.72**		**86.3**	

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Attachment 2 – Terravant Source Test Results

Terravant Wine Company
Buellton Facility ID 10918
Inlet & Outlet

Project 228-9789A
September 13, 2016
PTO No. 14626

Pollutant	ppmv	lb/hr	lb/day	tons/year	Permit Limits
ROC	10.63	0.53	12.80		
Scrubber	13.72	0.69	16.52		
Outlet	13.99	0.70	16.75		54.53 lb/day
Mean	**12.78**	**0.64**	**15.35**	**4.29**	9.89 tons/year
Ethanol	7.77	0.41	9.78		
Scrubber	9.87	0.52	12.44		
Outlet	9.97	0.52	12.53		
Mean	**9.20**	**0.48**	**11.58**		
Ethanol	43.97	2.30	55.32		
Scrubber	50.24	2.64	63.33		
Inlet	50.12	2.63	63.01		
Mean	**48.11**	**2.52**	**60.55**		
	Inlet lb/hr	Outlet lb/hr		% Removal	
Ethanol	2.30	0.41		82.3	
Scrubber	2.64	0.52		80.4	
Efficiency	2.63	0.52		80.1	
Mean	**2.52**	**0.48**		**80.9**	

Terravant Wine Company
Buellton Facility ID 10918
Inlet & Outlet

Project 228-9789B
October 4, 2016
PTO No. 14626

Pollutant	ppmv	lb/hr	lb/day	tons/year	Permit Limits
ROC	22.28	1.00	23.96		
Scrubber	21.11	1.04	24.88		
Outlet	33.32	1.63	39.14		54.53 lb/day
Mean	**25.57**	**1.22**	**29.34**	**5.42**	9.89 tons/year
Ethanol	14.61	0.71	16.93		
Scrubber	16.55	0.84	20.09		
Outlet	27.15	1.36	32.72		
Mean	**19.44**	**0.97**	**23.25**		
Ethanol	101.46	4.90	117.55		
Scrubber	142.39	7.20	172.88		
Inlet	115.13	5.78	138.74		
Mean	**119.66**	**5.96**	**143.06**		
	Inlet lb/hr	Outlet lb/hr		% Removal	
Ethanol	4.90	0.71		85.6	
Scrubber	7.20	0.84		88.4	
Efficiency	5.78	1.36		76.4	
Mean	**5.96**	**0.97**		**83.5**	

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Attachment 3 – NoMoVo Pictures

NoMoVo control systems (2)

NoMoVo control systems (2)

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Attachment 3 – NoMoVo Pictures

NoMoVo control system with NoMoVo piping manifold

Closed top fermentation tanks with NoMoVo piping manifold

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Attachment 4 – EcoPAS Pictures

EcoPAS control system

EcoPAS control system and condensate storage tanks

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Attachment 4 – EcoPAS Pictures

CCWS Series 400 tanks and EcoPAS piping manifold

CCWS Series 400 tanks and EcoPAS piping manifold

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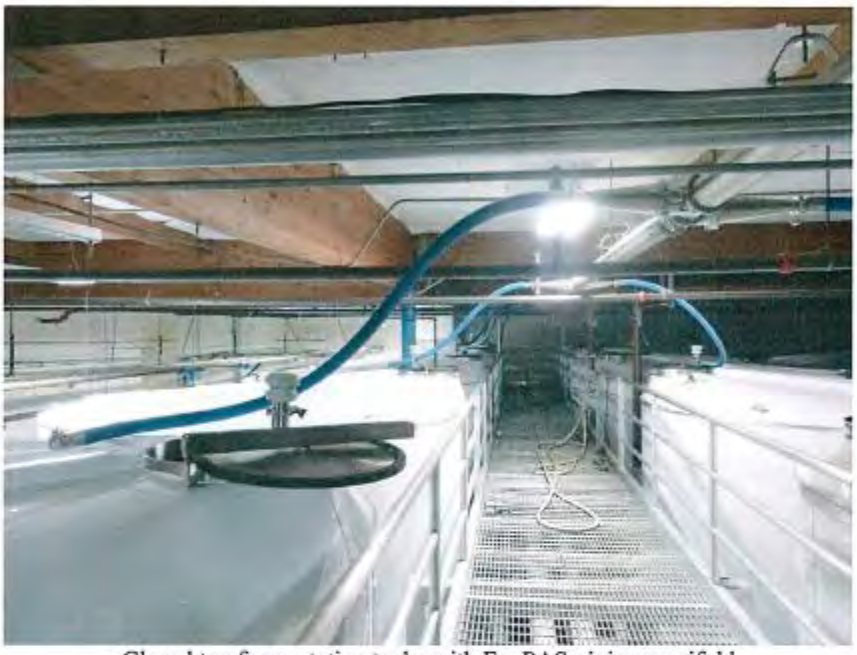
Attachment 4 – EcoPAS Pictures



Closed top fermentation tanks with EcoPAS piping manifold

Closed top fermentation tank with EcoPAS piping

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Attachment 5 – CCWS Control System Use Calendars

2013 Fermentation Season

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				August 1	2	3
4	5	6	7	8	9	10
11	12	13	14 Fermentation Start	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
September 1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30 NoMoVo I	October 1	2	3 NoMoVo I	4 NoMoVo I	5 NoMoVo I
6 NoMoVo I	7	8 NoMoVo I	9 NoMoVo I	10 NoMoVo I	11 NoMoVo I	12 NoMoVo I
13 NoMoVo I	14 NoMoVo I	15 NoMoVo I	16 NoMoVo I	17 NoMoVo I	18 NoMoVo I	19 NoMoVo I
20 NoMoVo I	21 NoMoVo I	22 NoMoVo I	23 NoMoVo I	24 NoMoVo I	25 NoMoVo I	26
27	28 NoMoVo I	29	30	31	November 1	2
3	4	5	6	7	8	9
10	11	12 Fermentation End	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

2014 Fermentation Season

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					August 1	2
3	4	5	6	7 Fermentation Start	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	September 1	2	3	4	5 NoMoVo I	6 NoMoVo I
7 NoMoVo I	8 NoMoVo I	9 NoMoVo I	10 NoMoVo I	11 NoMoVo I	12 NoMoVo I	13 NoMoVo I
14 NoMoVo I	15 NoMoVo I	16 NoMoVo I	17 NoMoVo I	18 NoMoVo I	19 NoMoVo I	20 NoMoVo I
21 NoMoVo I	22 NoMoVo I	23 NoMoVo I	24 NoMoVo I	25 NoMoVo I	26 NoMoVo I	27 NoMoVo I
28 NoMoVo I	29 NoMoVo I	30 NoMoVo I	October 1 NoMoVo I	2 NoMoVo I	3 NoMoVo I	4 NoMoVo I
5	6 NoMoVo I	7 NoMoVo I	8 NoMoVo I	9 NoMoVo I	10 NoMoVo I	11 NoMoVo I
12 NoMoVo I	13 NoMoVo I	14 NoMoVo I	15 NoMoVo I	16 NoMoVo I	17 NoMoVo I	18 NoMoVo I
19 NoMoVo I	20 NoMoVo I	21 NoMoVo I	22 NoMoVo I	23 Fermentation End	24	25
26	27	28	29	30	31	

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Attachment 5 – CCWS Control System Use Calendars

2015 Fermentation Season

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						August 1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17 Fermentation Start	18	19	20	21	22
23	24 NoMoVo 2	25 NoMoVo 2	26 NoMoVo 2	27 NoMoVo 2	28 NoMoVo 2	29 NoMoVo 2 EcoPAS
30 NoMoVo 2	31 NoMoVo 2 EcoPAS	September 1 NoMoVo 1 NoMoVo 2 EcoPAS	2 NoMoVo 1 NoMoVo 2 EcoPAS	3 NoMoVo 1 NoMoVo 2 EcoPAS	4 NoMoVo 1 NoMoVo 2 EcoPAS	5 NoMoVo 1 NoMoVo 2
6 NoMoVo 1 NoMoVo 2 EcoPAS	7 NoMoVo 1 NoMoVo 2 EcoPAS	8 NoMoVo 1 NoMoVo 2 EcoPAS	9 NoMoVo 1 NoMoVo 2 EcoPAS	10 NoMoVo 1 NoMoVo 2 EcoPAS	11 NoMoVo 1 NoMoVo 2 EcoPAS	12 NoMoVo 1 NoMoVo 2 EcoPAS
13 NoMoVo 1 NoMoVo 2 EcoPAS	14 NoMoVo 1 NoMoVo 2 EcoPAS	15 NoMoVo 1 NoMoVo 2 EcoPAS	16 NoMoVo 1 NoMoVo 2 EcoPAS	17 NoMoVo 1 NoMoVo 2 EcoPAS	18 NoMoVo 1 NoMoVo 2 EcoPAS	19 NoMoVo 1 NoMoVo 2 EcoPAS
20 NoMoVo 1 NoMoVo 2 EcoPAS	21 NoMoVo 1 NoMoVo 2 EcoPAS	22 NoMoVo 1 NoMoVo 2 EcoPAS	23 NoMoVo 1 NoMoVo 2 EcoPAS	24 NoMoVo 1 NoMoVo 2 EcoPAS	25 NoMoVo 1 NoMoVo 2 EcoPAS	26 NoMoVo 1 NoMoVo 2 EcoPAS
27 NoMoVo 1 NoMoVo 2 EcoPAS	28 NoMoVo 1 NoMoVo 2 EcoPAS	29 NoMoVo 1 NoMoVo 2 EcoPAS	30 NoMoVo 1 NoMoVo 2 EcoPAS	October 1 NoMoVo 1 NoMoVo 2 EcoPAS	2 NoMoVo 1 NoMoVo 2 EcoPAS	3 NoMoVo 1 NoMoVo 2 EcoPAS
4 NoMoVo 1 NoMoVo 2 EcoPAS	5 NoMoVo 1 NoMoVo 2 EcoPAS	6 NoMoVo 1 NoMoVo 2 EcoPAS	7 NoMoVo 1 NoMoVo 2 EcoPAS	8 NoMoVo 1	9	10
11	12 NoMoVo 1 NoMoVo 2 EcoPAS	13 NoMoVo 1 EcoPAS	14 NoMoVo 1 EcoPAS	15	16	17
18	19	20	21 Fermentation End	22	23	24
25	26	27	28	29	30	31

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Attachment 5 – CCWS Control System Use Calendars

2016 Fermentation Season

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	August 1	2	3	4	5	6
7	8	9	10	11	12	13
14	15 Fermentation Start	16	17	18	19	20
21	22	23	24 EcoPAS	25 EcoPAS	26 EcoPAS	27
28	29 EcoPAS	30 EcoPAS	31 EcoPAS	September 1 EcoPAS	2 EcoPAS	3 EcoPAS
4	5 EcoPAS	6 EcoPAS	7 EcoPAS	8 EcoPAS	9 EcoPAS	10 EcoPAS
11	12 EcoPAS	13 NoMoVo 1 EcoPAS	14 NoMoVo 1 EcoPAS	15 NoMoVo 1 EcoPAS	16 NoMoVo 1 EcoPAS	17 NoMoVo 1 EcoPAS
18 NoMoVo 1 EcoPAS	19 NoMoVo 1 EcoPAS	20 NoMoVo 1 NoMoVo 2 EcoPAS	21 NoMoVo 1 NoMoVo 2 EcoPAS	22 NoMoVo 1 NoMoVo 2 EcoPAS	23 NoMoVo 1 NoMoVo 2 EcoPAS	24 NoMoVo 1 NoMoVo 2 EcoPAS
25	26 NoMoVo 1 NoMoVo 2 EcoPAS	27 NoMoVo 1 NoMoVo 2 EcoPAS	28 NoMoVo 1 NoMoVo 2 EcoPAS	29 NoMoVo 1 NoMoVo 2 EcoPAS	30 NoMoVo 1 NoMoVo 2 EcoPAS	October 1 NoMoVo 1 NoMoVo 2 EcoPAS
2 NoMoVo 1 NoMoVo 2 EcoPAS	3 NoMoVo 1 NoMoVo 2 EcoPAS	4 NoMoVo 1 NoMoVo 2 EcoPAS	5 NoMoVo 1 NoMoVo 2 EcoPAS	6 NoMoVo 1 NoMoVo 2 EcoPAS	7 NoMoVo 1 NoMoVo 2 EcoPAS	8 NoMoVo 1 NoMoVo 2 EcoPAS
9 NoMoVo 1 NoMoVo 2 EcoPAS	10 NoMoVo 1 NoMoVo 2 EcoPAS	11 NoMoVo 1 NoMoVo 2 EcoPAS	12 NoMoVo 1 NoMoVo 2 EcoPAS	13 NoMoVo 1 NoMoVo 2 EcoPAS	14 NoMoVo 1 NoMoVo 2 EcoPAS	15 NoMoVo 1 NoMoVo 2 EcoPAS
16 NoMoVo 1 NoMoVo 2 EcoPAS	17 NoMoVo 1 NoMoVo 2 EcoPAS	18 NoMoVo 1 NoMoVo 2 EcoPAS	19 NoMoVo 1 NoMoVo 2 EcoPAS	20 NoMoVo 1 NoMoVo 2 EcoPAS	21 NoMoVo 1 NoMoVo 2 EcoPAS	22 NoMoVo 1 NoMoVo 2 EcoPAS
23 NoMoVo 1 NoMoVo 2 EcoPAS	24 NoMoVo 1 NoMoVo 2 EcoPAS	25 NoMoVo 1 NoMoVo 2 EcoPAS	26 NoMoVo 1 NoMoVo 2 EcoPAS	27 NoMoVo 1 NoMoVo 2 EcoPAS	28 NoMoVo 1 NoMoVo 2 EcoPAS	29 NoMoVo 1 NoMoVo 2 EcoPAS
30 NoMoVo 1 NoMoVo 2 EcoPAS	31 NoMoVo 1 NoMoVo 2 EcoPAS	November 1 NoMoVo 1 NoMoVo 2 EcoPAS Fermentation End	2	3	4	5

ATTACHMENT E
Achieved in Practice Determination for Wine Fermentation Emission Control Technologies Memo

Attachment 6 – September 30, 2016 U.S. EPA Letter to SJVAPCD

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 9
75 Hawthorne Street
San Francisco, CA 94105

9-30-16

Arnaud Marjollet
Director of Permit Services
San Joaquin Valley Air Pollution Control District
1990 East Gettysburg Avenue
Fresno, CA 93726

Dear Mr. Marjollet,

Thank you for the opportunity to provide comments on proposed permit actions for the following four winery facilities:

1. Bear Creek Winery, located in Lodi, CA (Project No. N-1153192): The proposed permits are for the installation of four 160,000 gallon and four 51,000 gallon stainless steel, insulated wine tanks to be used to ferment and store white and red wines.

2. CBUS Ops Inc. (dba Woodbridge Winery), located in Woodbridge, CA (Project No. N-1143210): The proposed permits are for the installation of twenty-four 108,000 gallon stainless steel, enclosed top, insulated wine fermentation and storage tanks.

3. Delicato Vineyards, located in Manteca, CA (Project No. N-1152244): The proposed permits are for the installation of 128 new insulated, stainless steel wine fermentation and storage tanks, ranging in size from 50,000 to 154,000 gallons.

4. E&J Gallo Winery, located in Livingston, CA (Project No. N-1142303): The proposed ATC is to modify the permits by establishing a combined specific limiting condition for VOC emissions as well as incorporate some permit units with existing ATCs into the existing Title V permit.

For each of these projects, the District has determined that the project will result in a federal major modification, and therefore triggers the requirement to use Best Available Control Technology under the District's regulations (SJV BACT), as defined in Rule 2201, which is equivalent to the federal requirement for Lowest Achievable Emission Rate (LAER). SJV BACT requires "the most stringent emission limitation which is achieved in practice by such class or category of source." The District has provided its BACT analysis in the Appendices of each evaluation and concludes that maintaining the average fermentation temperature below 95°F satisfies the SJV BACT requirement for wine fermentation tanks. Each evaluation also references the District's Achieved in Practice Analysis Memo, revised on May 9, 2016, which evaluates wine fermentation operations at other wineries to determine if any are using an achieved in practice (AIP) technology to reduce emission reductions from wine fermentation operations.

ATTACHMENT E
Achieved in Practice Determination for Wine Fermentation Emission Control Technologies Memo

Attachment 6 – September 30, 2016 U.S. EPA Letter to SJVAPCD

The District's LAER (SJV BACT) determinations for these proposed permits are essentially the same as the District's determinations for winery permits EPA has previously reviewed. Specifically, EPA provided detailed comments to the District regarding the availability of add-on controls for wine fermentation tanks in four letters dated October 21, 2013, May 5, 2014, June 16, 2014 and May 8, 2015. For the reasons discussed in our previous comment letters, EPA believes the District's analyses for the four proposed permits identified above do not satisfactorily demonstrate LAER. Please see Enclosures 1 and 2 for more details. Consequently, EPA believes the District's proposed permits do not implement LAER as required by Rule 2201.

Because we are concerned that the proposed permits may not ensure compliance with LAER, we are evaluating whether it is necessary to issue a formal objection to the permits. The comment period for the Bear Creek Winery permit closes on October 9, 2016, by which time EPA will decide whether to object. Therefore, EPA requests that the District confer with EPA, regarding LAER for the wine fermentation, to discuss options that could resolve this issue without a formal objection by EPA. Please contact me at your earliest convenience but no later than October 6, 2016 to discuss this matter. I can be reached at 415 972-3974 or at rios.gerardo@epa.gov.

Sincerely,

Gerardo C. Rios
Chief, Permits Office
Air Division

Enclosures

cc: Tung Le, CARB

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ATTACHMENT E
Achieved in Practice Determination for Wine Fermentation Emission Control Technologies Memo

Attachment 6 – September 30, 2016 U.S. EPA Letter to SJVAPCD

Enclosure 1 EPA Comments

Bear Creek Winery, Project No. N-1153192; CBUS Ops Inc. (dba Woodbridge Winery), Project No. N-1143210; Delicato Vineyards, Project No. N-1152244; E&J Gallo Winery, Project No. N-1142303

While the District evaluates the use of add-on controls at several winery facilities throughout the state, our comments are focused on the use of controls at two specific wineries, Central Coast Winery Services (CCWS) and Terravant Winery, both located in Santa Barbara, California.

The Central Coast Winery Service (CCWS) was issued a permit to construct and operate a (will insert name of control device from SB permit, rather than name vendor) in 2013 to control emissions from a portion of their wine fermentation operations. This equipment has been leased by the facility and has been in use during each crush season since 2103 (three seasons). The facility proposed use of this control equipment, not to meet any applicable BACT/LAER requirements, but instead to ensure their daily emissions remained below 55 lbs/day, which is the emission threshold for triggering BACT and offset requirements in the Santa Barbara County Air Pollution Control District (APCD). The fact that the source was not required to achieve emission reductions to satisfy a new source review (NSR) requirement and instead used the controls to avoid an applicable requirement, does not factor into the evaluation of whether a specific emission reduction rate has been achieved in practice. Similarly, the fact that the source only used the equipment as needed to comply with their 55 lb/day emission limit, does not affect whether a certain control rate has been AIP. EPA has reviewed the records from CCWS regarding their wine fermentation operations and using mass balance calculations have determined that the use of add-on controls during portions of the fermentation process have resulted in emission reductions of 76.6%. The demonstrated use of add-on controls to reduce emissions by 76.6% represents the lowest achievable emission rate for wine fermentation operations. The District has raised a concern that an ATC issued by the Santa Barbara County APCD to require the use of add-on controls to satisfy a BACT requirement was cancelled by the source, and thus cannot be relied on when considering whether the use of add-on controls at this facility have been AIP. While it is correct that an ATC allowing emissions at the facility to exceed 55lbs/day (thus triggering BACT) was cancelled, this did not affect the use of otherwise permitted control devices to reduce emissions from their wine fermentation operations. Lastly, EPA wants to address the District's concern that the control equipment at this facility has not been formally source tested. First we note that this control equipment was previously source tested by the Bay Area Air Quality Management District while in use at another facility and was able to achieve a control efficiency of greater than 99% using a direct measurement inlet and outlet source test. Second, due to the batch nature of the operation and the non-steady state of the wine fermentation process, source testing may not be the best way to accurately measure achieved emission reductions. Instead, emission calculations using mass-balance may be a better way to measure the actual emissions reductions achieved by the control device. Mass-balance calculations were used to determine the overall control efficiency of 76.6% for the batch wine fermentation process at this facility. Therefore, this same approach should be used to apply LAER to each of the proposed permits for wine fermentation operations.

The Terravant Winery was issued a permit to construct and operate a packed bed water scrubber in 2008 to control emissions from their wine fermentation operations. This custom designed control equipment is owned by the facility and has been in use during every crush season since 2008 (7 seasons). Similar to the Terravant facility, the control equipment was not installed to meet any applicable BACT/LAER requirements, but to comply with a daily emission limit of 55 lbs/day. As stated above in our summary of the Terravant operation, the fact that these controls were not required to meet BACT/LAER, or

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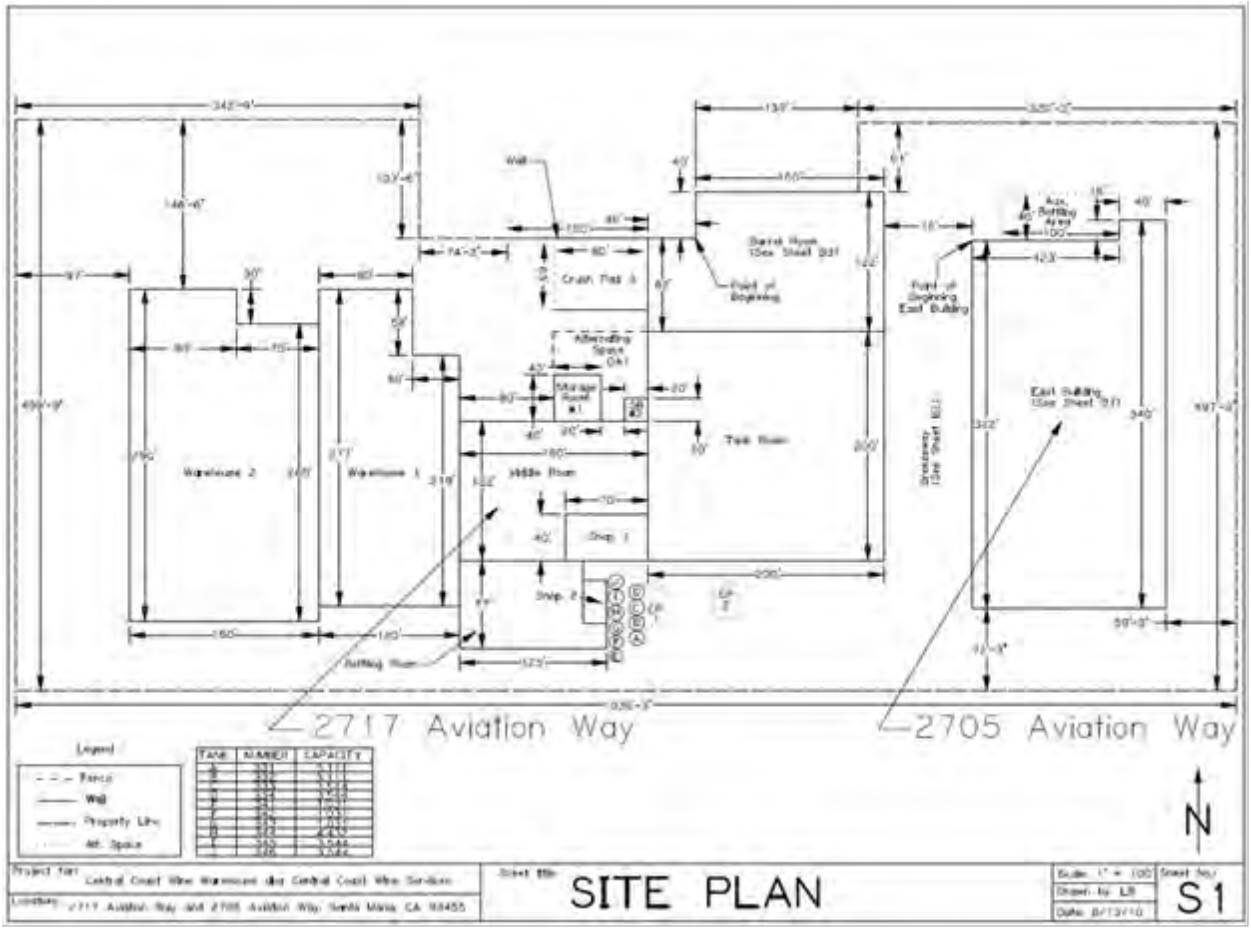
ATTACHMENT E
Achieved in Practice Determination for Wine Fermentation Emission Control Technologies Memo

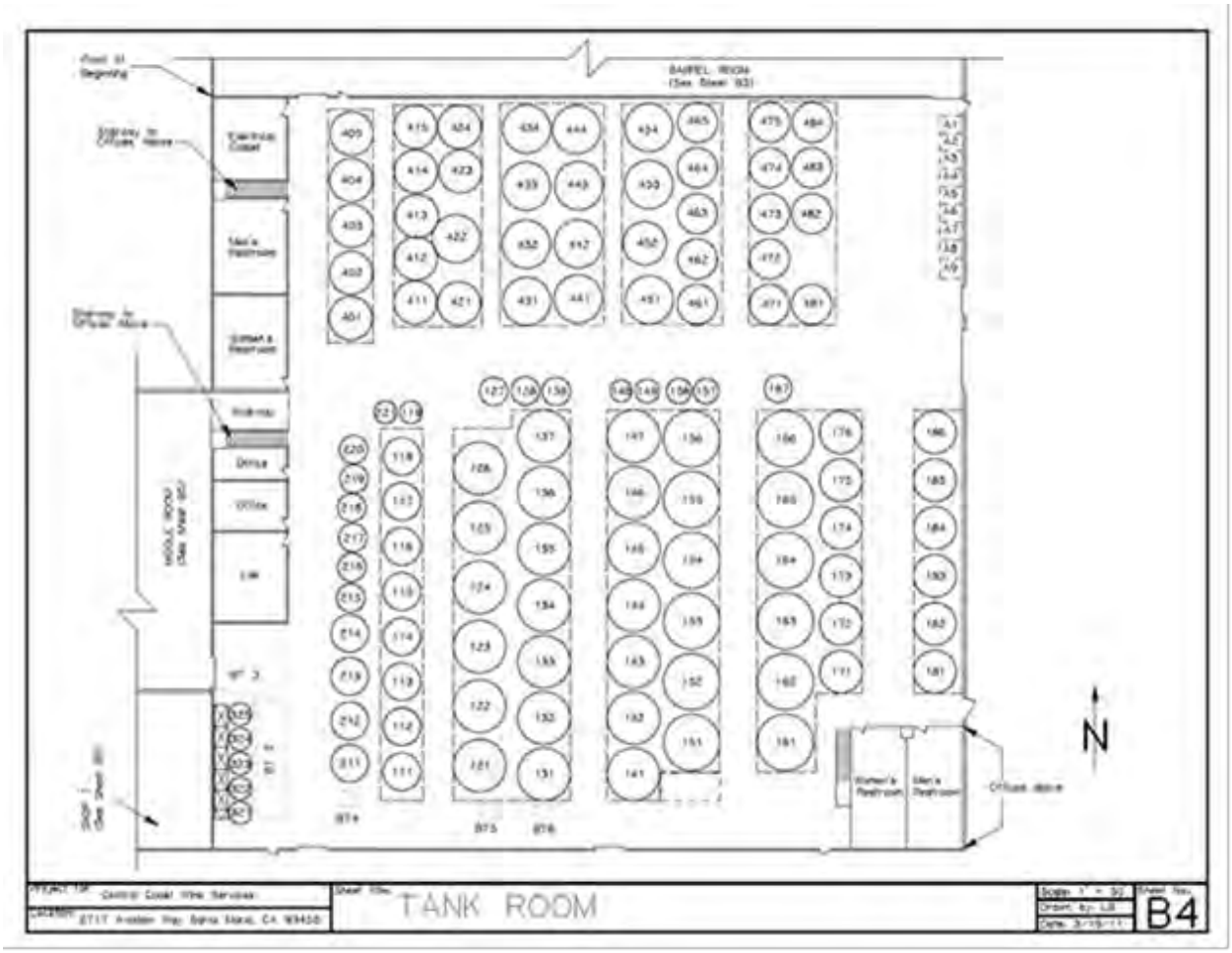
Attachment 6 – September 30, 2016 U.S. EPA Letter to SJVAPCD

required to be used at all times does not affect a determination of whether the use of such controls has been achieved in practice. While the installed control equipment was expected to achieve a 95% control efficiency, the source has only been able to maintain a 49% control efficiency on a consistent basis according to source test reports. The Santa Barbara County APCD has indicated that most issues related to the achieved control efficiency are likely due to operator error, given that water scrubbers are a well-established, high-efficiency control device for controlling ethanol emissions. For the purposes of evaluating whether the use of this control equipment can be considered AIP, the evaluation criteria is whether a source was able to achieve a certain level of control over a reasonable operating period. The District and EPA have already agreed that the reasonable operating period is a complete crush season. The facility has been able to achieve a minimum control efficiency of at least 47.6% over the seven seasons it has been in use. Therefore, for wine fermentation tanks, EPA believes that the lowest achievable emission rate which has been AIP, based on the demonstrated emission reductions achieved at the Terravant facility, is a 47.6% control efficiency, as measured by Santa Barbara County APCD source testing.

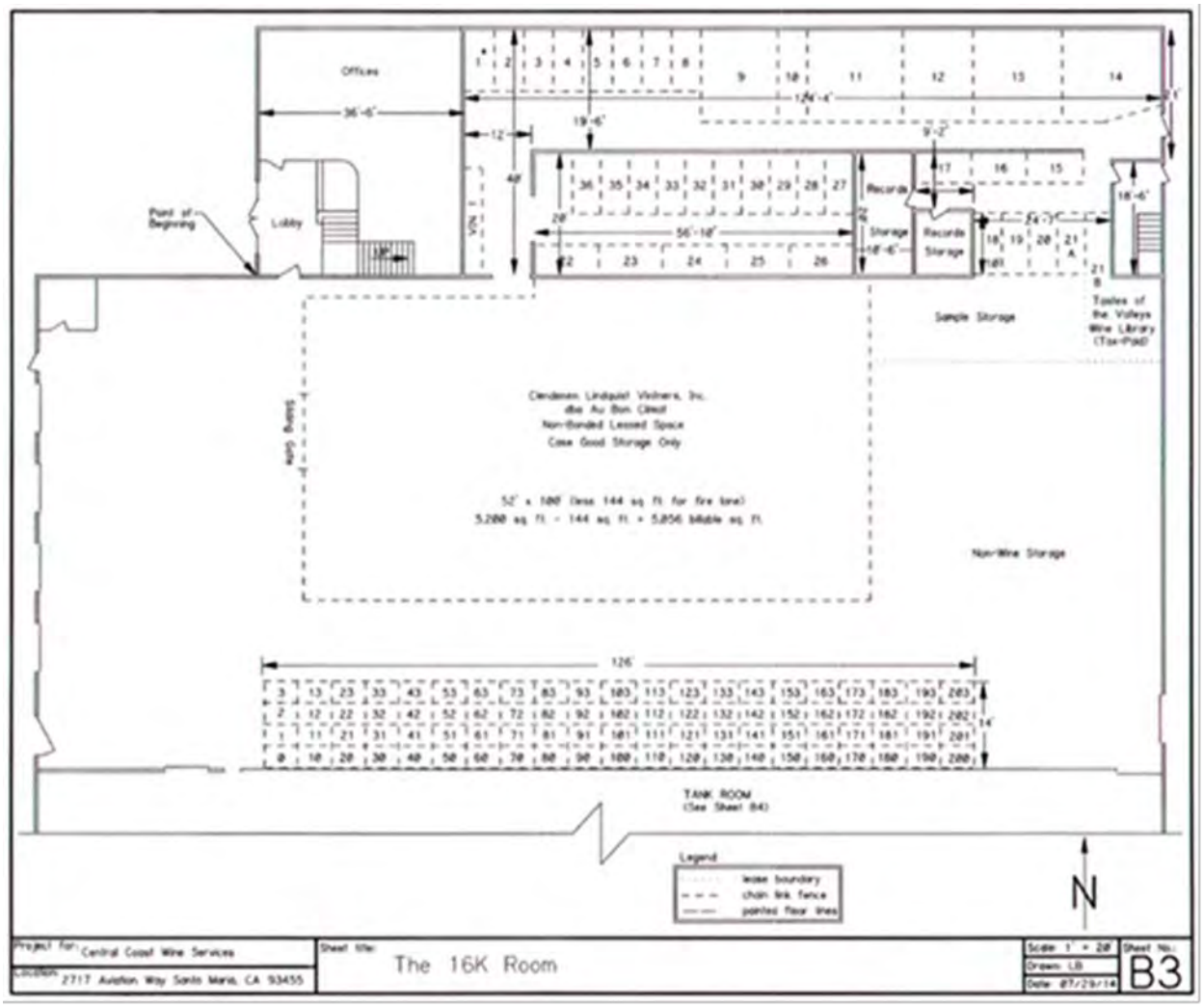
ATTACHMENT F
Facility Maps



ATTACHMENT F
Facility Maps



ATTACHMENT F
Facility Maps



ATTACHMENT G
Fee Statement

FEE STATEMENT
ATC Mod No. 15044 -02
FID: 11042 Central Coast Wine Services / SSID: 10834

Santa Barbara County
Air Pollution Control District

Permit Fee

Admin Change	**$429.00**

Fee Statement Grand Total = $429

Notes:
(1) Fee Schedule Items are listed in District Rule 210, Fee Schedule "A".
(2) The term "Units" refers to the unit of measure defined in the Fee Schedule.

Santa Barbara County
Air Pollution Control District

JUN 05 2018

Certified Mail
Return Receipt Requested

Richard Mather
Central Coast Wine Services
2717 Aviation Way, Suite 101
Santa Maria, CA 93455

FID: 11042
Permit: AM 15044 - 02
SSID: 10834

Re: Final Authority to Construct Modification 15044 - 02
Fee Due: $ 429

Dear Mr. Mather:

Enclosed is the final Authority to Construct Modification (ATC Mod) No. 15044 - 02 for a modification to the 400 series tanks, installation of a barrel room, and use of Best Available Control Technology at your winemaking facility at 2717 Aviation Way, Suite 101 in Santa Maria.

The District acknowledges that the comments on the original ATC 15044 were incorporated by reference by Central Coast Wine Services in the application and are part of the administrative record for this permit action.

THIS IS NOT YOUR PERMIT TO OPERATE. PLEASE READ ALL PERMIT CONDITIONS CAREFULLY.

Please carefully review the enclosed documents to ensure that they accurately describe your facility and that the conditions are acceptable to you. Note that your permitted emission limits may, in the future, be used to determine emission fees.

You should become familiar with all District rules pertaining to your facility. This permit does not relieve you of any requirements to obtain authority or permits from other governmental agencies.

This permit requires you to:

- Pay a **fee** of $429, which is due immediately and is considered late after 30 calendar days from the date stamped on the permit. Pursuant to District Rule 210.IV.B, no appeal shall be heard unless all fees have been paid. See the attached invoice for more information.
- Follow the conditions listed on your permit. Pay careful attention to the recordkeeping and reporting requirements.
- Mail us the enclosed Start-up Notification postcard once you have completed construction of the permitted equipment and are ready to operate it.
- Apply for and obtain a Permit to Operate prior to commencing routine equipment operation.

- Ensure that a copy of the enclosed permit is posted or kept readily available near the permitted equipment.

- Promptly report changes in ownership, operator, or your mailing address to the District.

If you are not satisfied with the conditions of this permit, **you have thirty (30) days from the date of this issuance to appeal this permit to the Air Pollution Control District Hearing Board** (ref: California Health and Safety Code, §42302.1). Any contact with District staff to discuss the terms of this permit will not stop or alter the 30-day appeal period.

Please include the facility identification (FID) and permit numbers as shown at the top of this letter on all correspondence regarding this permit. If you have any questions, please contact David Harris of my staff at (805) 961-8824.

Sincerely,

Aeron Arlin Genet
Air Pollution Control Officer

enc: Final ATC Mod 15044 - 02
Final Permit Evaluation
Invoice # AM 15044 - 02
Air Toxics "Hot Spots" Fact Sheet District Form 12B
Start-up Notification Postcard

cc: Central Coast Wine Services 11042 Project File
Engr Chron File
Accounting (Invoice only)

\\Nt\shares\Groups\ENGR\WP\Wineries\Central Coast Wine Services\ATC 15044-02\ATC Mod 15044 - 02 - Final Letter - 6-1-2018.docx

Santa Barbara County
Air Pollution Control District
260 N San Antonio Rd, Suite A
Santa Barbara, CA 93110-1315

Invoice: AM 15044 - 02
Date: JUN 05 2018
Terms: Net 30 Days

350150/6600/3280

INVOICE

BILL TO:	FACILITY:
Richard Mather Central Coast Wine Services (103930) 2717 Aviation Way, Suite 101 Santa Maria, CA 93455	Central Coast Wine Services 11042 2717 Aviation Way, Suite 101 Santa Maria

Permit: Authority to Construct (ATC) No. 15044 - 02

Fee Type: Permit Evaluation Fee (see the Fee Statement in your permit for a breakdown of the fees)

Amount Due: $ 429

REMIT PAYMENTS TO THE ABOVE ADDRESS
Please indicate the invoice number AM 15044 - 02
on your remittance.

IF YOU HAVE ANY QUESTIONS REGARDING YOUR INVOICE PLEASE CONTACT
OUR ADMINISTRATION DIVISION AT (805) 961-8800

The District charges $25 for returned checks. Other penalties/fees may be incurred as a result of returned checks and late payment (see District Rule 210). Failure to pay this Invoice may result in the cancellation or suspension of your permit. Please notify the District regarding any changes to the above information