EXHIBIT A

Santa Barbara County
Air Pollution Control District

August 18, 2017

Certified Mail
Return Receipt Requested

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

FID: 11042
Permit: A 15044
SSID: 10834

Re: Final Authority to Construct 15044
Fee Due: $ 3,725

Dear Mr. Mather:

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

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 $3,725, 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 Kevin Brown of my staff at (805) 961-8826.

Sincerely,

Michael Goldman, Manager
Engineering Division

enc: Final ATC 15044
Final Permit Evaluation
Invoice # A 15044
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)
Kevin Brown (Cover letter only)

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

Invoice: A 15044
Date: AUG 18 2017
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

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

Amount Due: $ 3,725

REMIT PAYMENTS TO THE ABOVE ADDRESS
Please indicate the invoice number A 15044
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

Santa Barbara County
Air Pollution Control District

Authority to Construct 15044

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) based on a 30-day rolling average. Compliance with this condition shall be based on weekly reporting during fermentation as specified in Condition 11.

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 using a 30-day rolling average, 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 using 30-day rolling average, 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 using 30-day rolling average, 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. 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. 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 engr@sbcapcd.org). 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 to determine the 30-day rolling average.

   During the SCDP, the permittee shall:

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

   c. Arrange for District inspection not more than fourteen (14) calendar days (or other mutually agreed to time period) after the SCDP begins. 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;

   d. 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.

    d. The collective capture and control efficiency of the NoMoVo and EcoPAS systems based on a 30-day rolling average.

    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 after October 17, 2003 shall be certified per the provisions of Rule 360. 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

AUG 18 2017

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

Notes:

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

TABLE 1 - Permitted Emissions
ATC 15044
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
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
Central Coast Wine Services

Emission Source	Pollutant	BACT Technology	BACT Performance Standard
Wine Fermentation Tanks	ROC	NoMoVo and EcoPAS winery emission capture and control systems	Combined capture and control efficiency of 67.0% (mass basis) based on a 30-day rolling average

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

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 four years ago and the EcoPAS system was installed two years ago, 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 deemed the application complete on May 11, 2017. This permit authorizes red or 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 increases 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 has elected to also install these BACT capture and control systems on all the fermentation tanks at the facility. 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.

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 rolling 30-day combined capture and control efficiency for the NoMoVo and EcoPAS systems using the equation below. Note that Day 1 is the first point in the data set (i.e. 29 days ago) and Day 30 is the current day.

$$CCE = \{[(C_{NoMoVo-Day\,1} + C_{NoMoVo-Day\,2} + \ldots + C_{NoMoVo-Day\,30}) + (C_{EcoPAS-Day\,1} + C_{EcoPAS-Day\,2} + \ldots + C_{EcoPAS-Day\,30})] \div (U_{Day\,1} + U_{Day\,2} + \ldots + U_{Day\,30})\} \times 100$$

Where:

- CCE = Combined capture and control efficiency for the NoMoVo and EcoPAS systems for a 30 day rolling average, %
- $U_{Day\,1}, U_{Day\,2}, \ldots, U_{Day\,30}$= Daily uncontrolled wine emissions, lbs
- $C_{NoMoVo-Day\,1}, C_{NoMoVo-Day\,2}, \ldots, C_{NoMoVo-Day\,30}$ = NoMoVo system's daily captured and controlled wine emissions, lbs
- $C_{EcoPAS-Day\,1}, C_{EcoPAs-Day\,2}, \ldots, C_{EcoPAS-Day\,30}$ = EcoPAS system's daily captured and controlled wine emissions, lbs

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 wine fermentation since being installed.

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. A copy of this letter may be found in Attachment F of this permit evaluation. 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. A copy of this letter may be found in Attachment G of this permit evaluation. The District concurs that both control technologies are achieved in practice. 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.

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 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 "BACT".

In response to comments on the draft permit from the Wine Institute, the District performed a thorough evaluation of the emission control technologies currently in use at wineries in Santa Barbara County. This analysis, titled *Memorandum: Achieved in Practice Determination for Wine Fermentation Emission Control Technologies,* determined that all three control technologies currently in use in Santa Barbra County (NoMoVo, EcoPAS, and the packed bed scrubber system at Terravant Wine Company) meet our achieved in practice criteria. 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 based on a 30-day rolling average.

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 The District issued a draft permit to Central Coast Wine Services on May 31, 2017. Central Coast Wine Services submitted comments on the draft permit on June 7, 2017. CCWS's comment letter can be found in Attachment J and the District's responses to these comments can be found in Attachment K. In addition, Barg Coffin Lewis & Trapp, LLP, representing the Wine Institute, submitted comments on the draft permit on June 20, 2017. The Wine Institute's comment letter can be found in Attachment L and the District's responses to these comments can be found in Attachment M.

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.

Kevin Brown	August 18, 2017		8/18/17
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. September 30, 2016 U.S. EPA Letter to SJVAPCD
G. October 7, 2016 U.S. EPA Letter to SJVAPCD
H. Facility Maps
I. Fee Statement
J. CCWS Comments on Draft Permit
K. District Responses to CCWS Comments on Draft Permit
L. Wine Institute Comments on Draft Permit
M. District Responses to Wine Institute Comments on Draft Permit

Authority to Construct 15044

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 show n in this table are included for the purposes of calculating the reasonable w orst 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

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 w ine per year in oak cooperage.
2. ETOH = ethanol
3. Aging EF = (gal w ine evap/gal w ine) * (lb w ine evap/gal w ine evap) * (lb ETOH/lb w ine 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 w ine	assumption
ETOH Vol % White =	13.00%	gal/gal w ine	assumption
ETOH Wt % Red =	11.40%	lb/lb w ine	calculated
ETOH Wt % White =	10.56%	lb/lb w ine	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 w ine	District (loss of w ine)

Notes:

- brow n cells are calculations
- black cells are APCD default values

Authority to Construct 15044

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.

Authority to Construct 15044

ATTACHMENT B
Controlled Emission Calculations

NoMoVo System

Mass balance over one cycle of NoMoVo system:

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

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

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

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

Authority to Construct 15044

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

Authority to Construct 14632

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 14632

ATTACHMENT D
BACT Determination

ENGINEERING EVALUATION BACT DISCUSSION LIST- NoMoVo System

1. Pollutant(s): ROC

2. Emission Points: Wine Fermentation Tanks

3. BACT Determination Summary:

   Technology: NoMoVo Capture and Control System

   Performance Standard: Collective facility-wide capture and control efficiency of 67.0% (mass basis) based on a 30-day rolling average.

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. 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) based on a 30-day rolling average. 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.

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

ATTACHMENT D
BACT Determination

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 on a 30-day rolling basis to determine compliance with the BACT performance standard.

11. Compliance Averaging Times: The capture and control efficiency shall be based on a 30-day rolling averaging period.

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; 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

ATTACHMENT D
BACT Documentation

ENGINEERING EVALUATION BACT DISCUSSION LIST- EcoPAS System

1. Pollutant(s): ROC

2. Emission Points: Wine Fermentation Tanks

3. BACT Determination Summary:

   Technology: EcoPAS Ethanol Capture and Control System

   Performance Standard: Collective facility-wide capture and control efficiency of 67.0% (mass basis) based on a 30-day rolling average.

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. 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 a 30-day rolling period.

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) based on a 30-day rolling average. 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 on a 30-day rolling basis to determine compliance with the BACT performance standard.

11. Compliance Averaging Times: The capture and control efficiency shall be based on a 30-day rolling averaging period.

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; 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

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 and the NoMoVo and EcoPAS control systems in use at Central Coast Wine Services are achieved in practice emission control technologies for wine fermentation operations.

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 light of this permit application, the question has arisen as to whether any of the emission control systems

[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

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 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. 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.

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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 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 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

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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.

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.

In summary, the NoMoVo emission control system has been successfully operated to control wine fermentation emissions 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. Therefore, the NoMoVo control system is considered achieved in practice emission control technology for wine fermentation operations at new and modified wineries.

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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.

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 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.

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In summary, the EcoPAS emission control system has been successfully operated to control wine fermentation emissions 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. Therefore, the EcoPAS control system is considered achieved in practice emission control technology for wine fermentation operations at new and modified wineries.

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:

> "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.

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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 and the NoMoVo and EcoPAS control systems in use at Central Coast Wine Services are achieved in practice emission control technologies for wine fermentation operations.

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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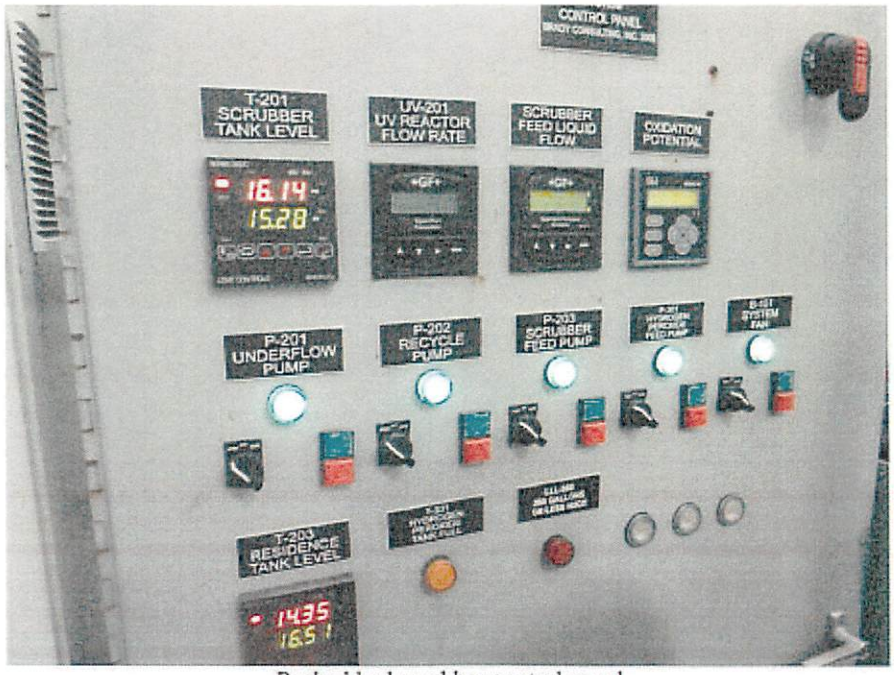
Attachment 1 – Terravant Packed Bed Scrubber Pictures

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	23.88	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	27.38	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	23.98		
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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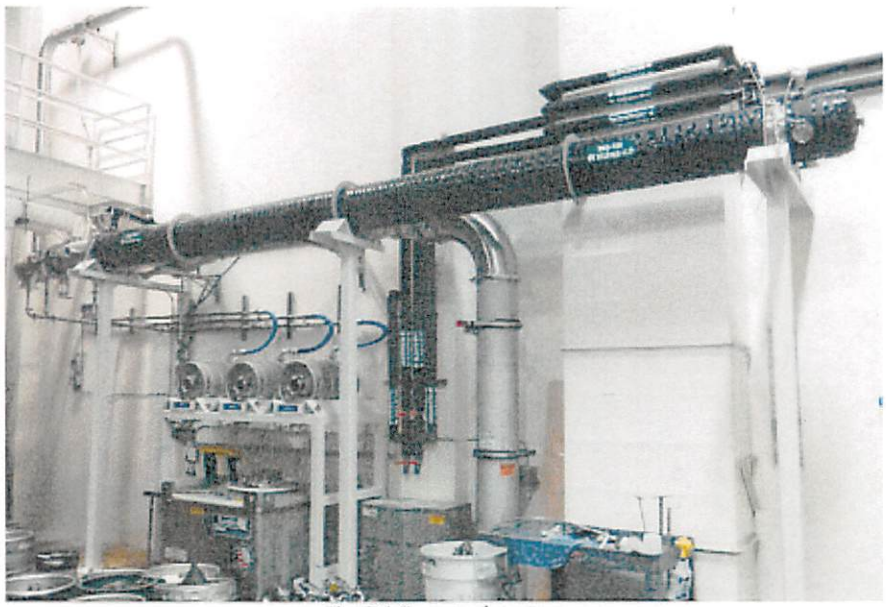
Attachment 4 – EcoPAS Pictures



EcoPAS control system

EcoPAS control system and condensate storage tanks

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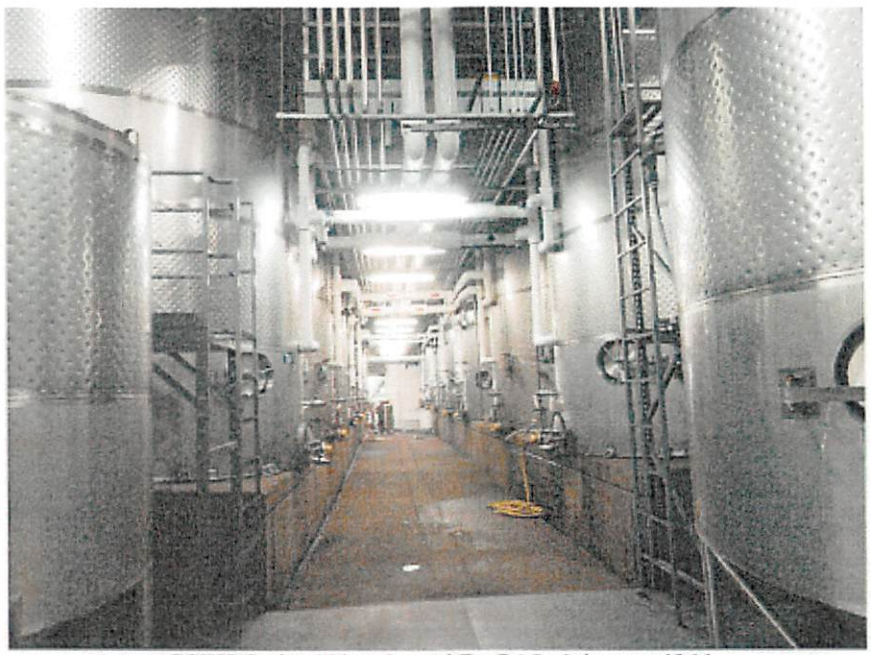
Attachment 4 – EcoPAS Pictures

CCWS Series 400 tanks and EcoPAS piping manifold



CCWS Series 400 tanks and EcoPAS piping manifold

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Achieved in Practice Determination for Wine Fermentation Emission Control Technologies Memo

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 1	October 1	2	3 NoMoVo 1	4 NoMoVo 1	5 NoMoVo 1
6 NoMoVo 1	7	8 NoMoVo 1	9 NoMoVo 1	10 NoMoVo 1	11 NoMoVo 1	12 NoMoVo 1
13 NoMoVo 1	14 NoMoVo 1	15 NoMoVo 1	16 NoMoVo 1	17 NoMoVo 1	18 NoMoVo 1	19 NoMoVo 1
20 NoMoVo 1	21 NoMoVo 1	22 NoMoVo 1	23 NoMoVo 1	24 NoMoVo 1	25 NoMoVo 1	26
27	28 NoMoVo 1	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 1	6 NoMoVo 1
7 NoMoVo 1	8 NoMoVo 1	9 NoMoVo 1	10 NoMoVo 1	11 NoMoVo 1	12 NoMoVo 1	13 NoMoVo 1
14 NoMoVo 1	15 NoMoVo 1	16 NoMoVo 1	17 NoMoVo 1	18 NoMoVo 1	19 NoMoVo 1	20 NoMoVo 1
21 NoMoVo 1	22 NoMoVo 1	23 NoMoVo 1	24 NoMoVo 1	25 NoMoVo 1	26 NoMoVo 1	27 NoMoVo 1
28 NoMoVo 1	29 NoMoVo 1	30 NoMoVo 1	October 1 NoMoVo 1	2 NoMoVo 1	3 NoMoVo 1	4 NoMoVo 1
5	6 NoMoVo 1	7 NoMoVo 1	8 NoMoVo 1	9 NoMoVo 1	10 NoMoVo 1	11 NoMoVo 1
12 NoMoVo 1	13 NoMoVo 1	14 NoMoVo 1	15 NoMoVo 1	16 NoMoVo 1	17 NoMoVo 1	18 NoMoVo 1
19 NoMoVo 1	20 NoMoVo 1	21 NoMoVo 1	22 NoMoVo 1	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

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

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

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

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
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.

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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 F
September 30, 2016 U.S. EPA Letter to SJVAPCD

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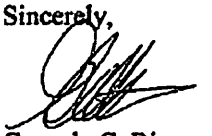
Because we are concerned that the proposed permits may not ensure compliance with LAER, we are evaluating whether it is necessary to issue a formal objection to the permits. The comment period for the Bear Creek Winery permit closes on October 9, 2016, by which time EPA will decide whether to object. 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

ATTACHMENT F
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

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ATTACHMENT F
September 30, 2016 U.S. EPA Letter to SJVAPCD

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ATTACHMENT G
October 7, 2016 U.S. EPA Letter to SJVAPCD

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

October 7, 2016

David Warner
Deputy Air Pollution Control Officer
San Joaquin Valley Air Pollution Control District
1990 East Gettysburg Avenue
Fresno, CA 93726

Dear Mr. Warner:

We are writing to acknowledge receipt of the letter from San Joaquin Valley Air Pollution Control District (the District) dated October 7, 2016, regarding the following four winery permit projects: 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).

Thank you for your confirmation that the District will not proceed with the issuance of a Certificate of Conformity (COC) for any of these proposed permit actions. In the future, each of these sources will be required to submit a new title V significant revision application to modify their current title V permit and the District will be required to submit for EPA review a proposed significant title V revision in accordance with the requirements of District Rule 2520 – Federally Mandated Operating Permits. We appreciate your commitment to work with us to resolve the Lowest Achievable Emission Rate (LAER) issue and ensure the final title V operating permits comply with all applicable requirements and provisions of Rule 2520.

As stated in our September 30, 2016 letter regarding these same four proposed permit actions, EPA remains concerned that the control requirements contained in the proposed permits do not represent "Best Available Control Technology" (BACT), as required by SIP-approved SJV Rule 2201, section 4.1.3. The definition of BACT in SJV Rule 2201, section 3.10 is equivalent to federal LAER. Accordingly, until this issue regarding LAER is resolved, construction under these proposed permits may be subject to enforcement action.

We are committed to working with the District to ensure that the final permits are consistent with all applicable requirements. I look forward to our discussions. In the meantime, feel free to contact me at 415-972-3974.

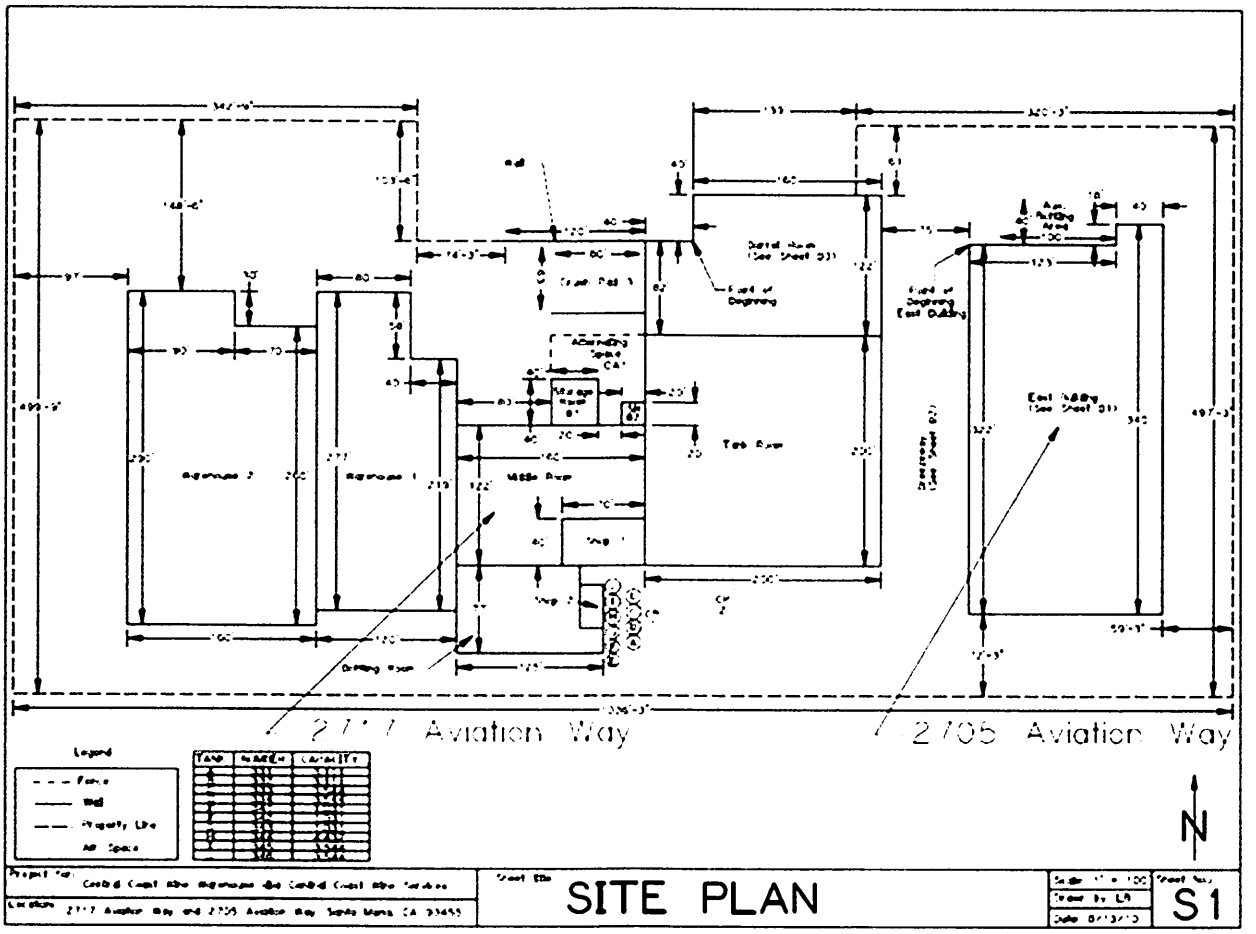
Sincerely,

Gerardo C. Rios
Chief, Permits Office
Air Division

cc: Tung Le, CARB

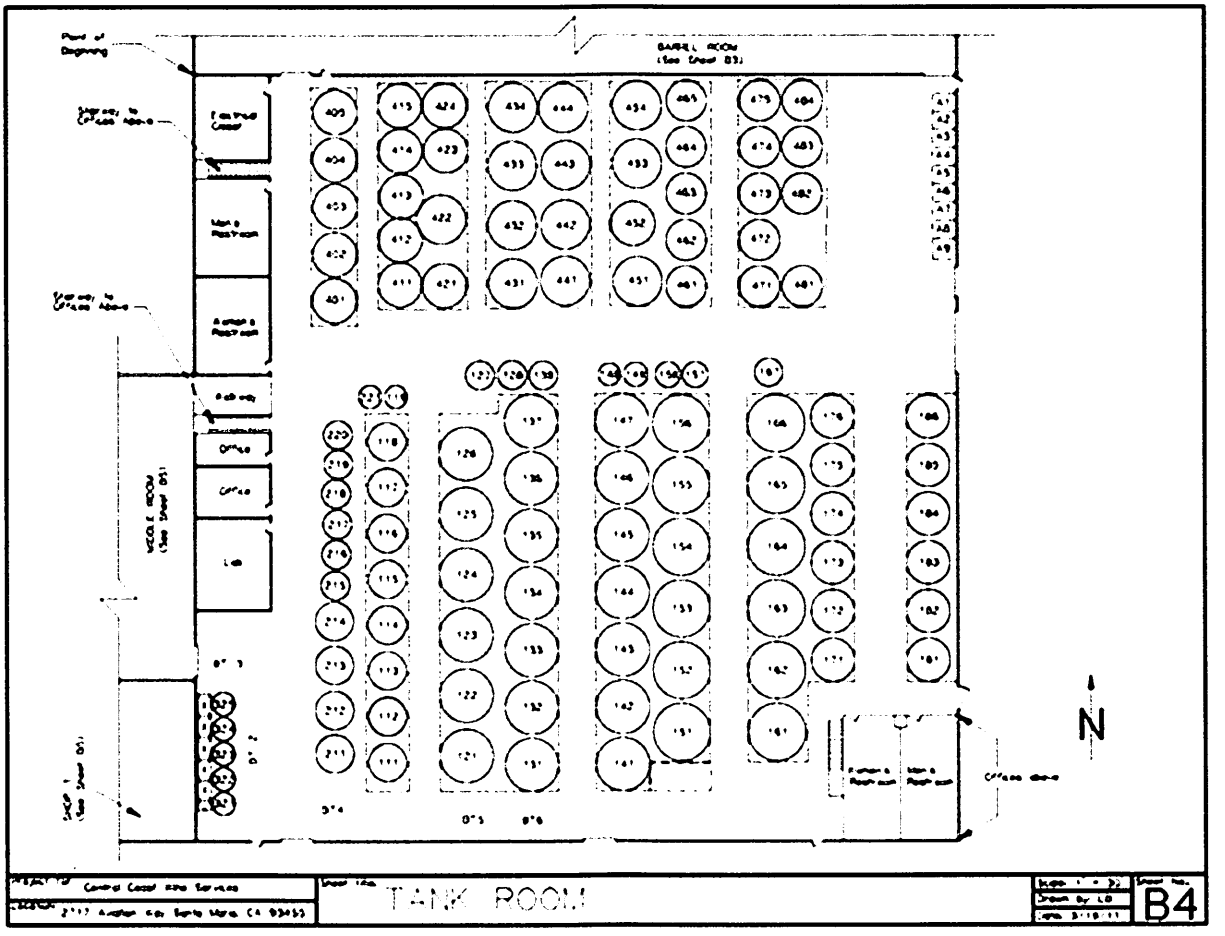
Authority to Construct 15044

ATTACHMENT H
Facility Maps



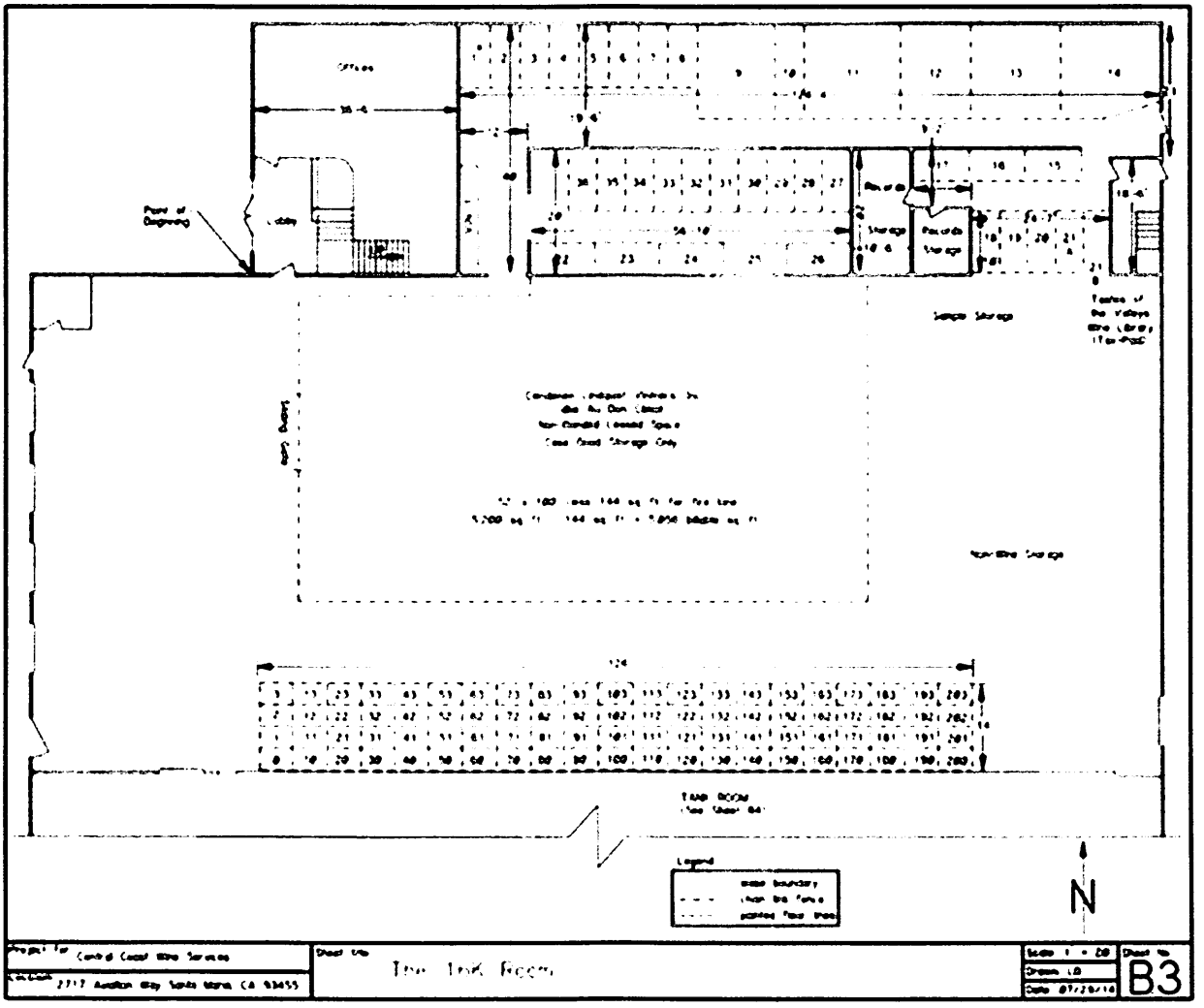
Authority to Construct 15044

ATTACHMENT H
Facility Maps



Authority to Construct 15044

ATTACHMENT H
Facility Maps



ATTACHMENT I
Fee Statement

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

Santa Barbara County
Air Pollution Control District

Device Fee

Device No.	Device Name	Fee Schedule	Qty of Fee Units	Fee per Unit	Fee Units	Max or Min. Fee Apply?	Number of Same Devices	Pro Rate Factor	Device Fee	Penalty Fee?	Fee Credit	Total Fee per Device
388059	Steel Tanks 401-405, 411-415	A6	14.980	3.95	Per 1000 gallons	Min	10	1.000	684.70	0.00	0.00	684.70
388060	Steel Tanks 421, 423-424, 452	A6	14.980	3.95	Per 1000 gallons	Min	4	1.000	273.88	0.00	0.00	273.88
388061	Steel Tanks 422, 431-434, 441-444, 451, 453-454	A6	20.736	3.95	Per 1000 gallons	No	12	1.000	982.89	0.00	0.00	982.89
388062	Steel Tanks 461-465, 471-475, 481-484	A6	7.527	3.95	Per 1000 gallons	Min	14	1.000	958.58	0.00	0.00	958.58
386512	NoMoVo Wine Emission Capture System	A1.a	1.000	68.92	Per equipment	No	6	1.000	413.52	0.00	0.00	413.52
388029	EcoPAS System	A1.a	1.000	68.92	Per equipment	No	1	1.000	68.92	0.00	0.00	68.92
388032	Condensate Collection Vessels	A6	0.015	3.95	Per 1000 gallons	Min	3	1.000	205.41	0.00	0.00	205.41
388033	Stainless Steel Tote	A6	0.250	3.95	Per 1000 gallons	Min	1	1.000	68.47	0.00	0.00	68.47
388058	Barrel Storage Room	A1.a	1.000	68.92	Per equipment	No	1	1.000	68.92	0.00	0.00	68.92
	Device Fee Sub-Totals =								**$3,725.29**	**$0.00**	**$0.00**	
	Device Fee Total =											**$3,725.29**

Permit Fee

Fee Based on Devices **$3,725.29**

Fee Statement Grand Total = $3,725

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.

ATTACHMENT J
CCWS Comments on Draft Permit

Central Coast Wine Services
2717 Aviation Way, Suite 101
Santa Maria, CA 93455
(805) 318-6796 FAX (805) 928-5629

Central Coast Wine Services

June 7, 2017

Mr. Kevin Brown
Santa Barbara County
Air Pollution Control District
260 North San Antonio Road, Suite A
Santa Barbara CA 93110

Subject: Central Coast Wine Services
Comments on Draft ATC 15044
FID 11042 SID 108534

Dear Mr. Brown,

Central Coast Wine Services (CCWS) received the draft Authority to Construct (ATC) 15044 for the authorization of red and white wine fermentation in the 400 series tanks and for the installation of a new barrel room. The following comments on the draft ATC are provided for the District's consideration:

1. **Draft ATC 15044, Condition 2.c, Page 3 of 17**
Condition 2.c requires a minimum combined capture and control efficiency of 67.0%. It is understood that this efficiency level is based upon data provided with our ATC application. However, it was also understood from our discussions with the District during the pre-application meeting that if the control efficiency that was presented in our application was not achievable during the Source Compliance Demonstration Period (SCDP), CCWS would be allowed to petition the District, either through the ATC modification process or letter, to adjust this value appropriately. CCWS feels that this contingency should be documented within this condition. 1-1

2. **Draft ATC 15044, Condition 2.p, Page 4 of 17**
Condition 2.p requires the inspection and cleaning of the capture and control system components following a tank foam-over. However, this condition stipulates that this activity shall be performed "as-necessary". The term "as-necessary" is very vague and is subject to a very broad interpretation. Furthermore, CCWS believes that this condition is unnecessary. The requirement to maintain the capture and control systems is already conditioned in Condition 15. Please remove this condition. 1-2

3. **Draft ATC 15044, Condition 8.c, Page 10 of 17**
Condition 8.c requires that when CCWS employs the Expedited Tank Change process, we must identify which BACT capture and control system the tank(s) will be connected to. This condition appears to be in opposition to the BACT application methodology for the current tank 1-3

ATTACHMENT J
CCWS Comments on Draft Permit

inventory. That is, CCWS can choose to use either the NoMoVo or the EcoPAS BACT control technology on any of the existing tanks. Furthermore, the specific control technology used on a specific tank can be changed as necessary for satisfy CCWS's operational needs. Any tank added through the Expedited Tank Change process should be allowed the same flexibility.

4. **Draft ATC 15044, Condition 9, Page 10 of 17**
Condition 9 establishes a 60-day Source Compliance Demonstration Period (SCDP). Condition 9.d establishes a requirement to apply for a PTO within 45-days of the start of the SCDP. Since the BACT control efficiency will be based upon a 30-day rolling average, on the 45th day of the SCDP there will have only been 15 data points to be used to determine if CCWS will be able to achieve the 67% combined control efficiency (see Item 1 above). In reality, since it takes a few days to prepare and obtain approvals on any application documents, CCWS will have significantly less than 15-days to determine the feasibility of the 67% efficiency value. If adjustments or modifications to the devices are required, it would take an additional 30+ days to determine the effect of those modifications. 1-4

CCWS would like to propose that the SCDP for this ATC be comprised of the entire 2017 fermentation season, or 90-days, whichever is longer. Condition 9.d would then require a PTO application within 75 days of the start of SCDP.

5. **Draft ATC 15044, Condition 9.d, Page 10 of 17**
CCWS questions the necessity of the inclusion of the March 1, 2018 deadline in Condition 9.d. The wording of this condition reads such that, through no fault of CCWS and even if the PTO application is submitted in a timely manner, if the District does not issue the PTO by that date CCWS must cease operations. This concern is supported by the comment on page 2 of 8 of the Permit Evaluation (end of top paragraph) where it states that, upon use this ATC would supersede the current existing PTO (PTO 14696).

CCWS understands that if we do not comply with all the SCDP conditions that we would be in violation of the District's Rules and would be subject to a possible mandatory shut-down. However, if CCWS complies with all SCDP conditions, and through no-fault of our own, the District is unable to issue the PTO by March 1, 2018, CCWS should not be penalized. Since ATC 15044 will supersede PTO 14696, this would force CCWS to shutdown winery operations. It is our understanding that this shutdown would force the emptying of the all tanks storing or fermenting wine and the emptying of the barrel rooms. This would be very detrimental to CCWS' business and jeopardize our ability to continue as an ongoing business. Therefore, CCWS does not accept the inclusion of the March 1, 2018 "drop-dead" deadline in this condition. 1-5

6. **Draft ATC 15044, Conditions 3.c, 4.b, 4.d, 4.e, 4.f, 5.b, 5.d, 5.f, and 11.b**
Each of the conditions above pertain to monitoring, recordkeeping or reporting of data relating to Alternating Proprietors (AP). AP's no longer share CCWS cellar space. CCWS does require that the APs weigh their grapes as they come onto the facility. However, CCWS does not track their equipment locations nor equipment (tank) inventories. Furthermore, CCWS is prohibited by TTB/ABC from performing recordkeeping for the AP's.

These requirements appear to be legacy requirements from a time when AP's shared cellar space with CCWS operations. Please remove all requirement to record and report on AP operations under this ATC. 1-6

It is noted that in CCWS's 2016 emissions spreadsheet, it was reported that there was AP fermentation occurring during October 2016. This was reported improperly due to a terminology

ATTACHMENT J
CCWS Comments on Draft Permit

difference between the District's permit and CCWS winemaking staff. CCWS established a Turn Key bond (CCWS' marketing entity) in 2016 due to the opening a tasting room. Rules are that you must produce at least 50% of your wine in the facility where bond resides to have a tasting room. Some fruit that was brought in from outside vineyards and owned by Turn Key was listed as AP emissions (Turn Key is an AP). However, the fruit was crushed under the CCWS bond and is on the CCWS report of operations.

Going forward, all fruit brought in and fermented will be under the CCWS bond and reports. Ownership is a completely different issue. When preparing wine to be bottled, then the product will transfer to the AP/Turn Key bond.

7. **Fee Statement, Attachment F**
All of the devices subject to this ATC, with the exception of the new barrel room (Device 388058) are existing devices. As such fees were already assessed at the time of the issuance of the current PTO (PTO 14696) on March 23, 2016. The fees should be prorated to account for the portion of the time that is covered by the past payment of fees (ATC 15044 issuance date through March 23, 2019). 1-7

Please let us know if there are any questions or comments.

Sincerely,

Richard Mather
Business Manager
Central Coast Wine Services

C: M. Strange, M. F. Strange & Associates, Inc.

ATTACHMENT K
District Responses to CCWS Comments on Draft Permit

The following are the District's responses to comments on the draft permit by Central Coast Wine Services in a letter dated June 7, 2017. Comments are summarized from the CCWS letter. The referenced item numbers correspond to the item numbers identified in the right hand margin of the comment letter in Attachment J.

Item	Comment	Response
1-1	Condition 2.c. Add a contingency to the permit stating that CCWS may petition the District via letter or ATC modification to adjust the control efficiency if it is not achieved during the SCDP.	As noted during our pre-application meeting, the District is open to modifying the control efficiency value via a modification to the ATC permit should the control systems not achieve the required control efficiency during the SCDP. CCWS and its vendors would first have to evaluate the technical reasons for the systems not achieving their designated control levels and then implement required fixes. This is standard operating practice and most issues are resolved during this debugging period. If after all the debugging is completed, all the technical analyses are completed, all the modifications/changes to the control systems are completed and any permit monitoring, recordkeeping or reporting changes are completed, it is clear that the performance standard cannot be achieved, the District would then be open to modifying the control efficiency value via a modification to the ATC permit. Further, CCWS would be required to implement all feasible procedures to maintain the control efficiency. The above process is a standard District practice, and explicit inclusion in the permit is unnecessary.
1-2	Condition 2.p. Remove the text "as-necessary" since it is vague. Also, delete the condition since Condition 15 already addresses maintenance requirements.	This requirement is needed since it is called out in the vendor guarantees as a necessary operational procedure to ensure proper operation of the control device. We concur that the words "as necessary" can be interpreted as being vague and have deleted the term from the condition.
1-3	Condition 8.c. This condition conflicts with the BACT condition. Any tank added via the Expedited Tank Changes	The requirement to identify which control system will be connected to tank(s) installed using the *Expedited Tank Changes* Condition has been removed from the final permit.

ATTACHMENT K
District Responses to CCWS Comments on Draft Permit

Item	Comment	Response
	condition should have the flexibility to use either control system as determined by CCWS.	
1-4	Condition 9. The proposed 60-day SCDP period is not sufficient in order to gather the data and submit the PTO application within 45 days. Change the SCDP period to be the entire 2017 fermentation season or 90 days, whichever is longer.	The SCDP period has been increased to 90 days (60 days to submit the PTO application) in the final permit.
1-5	Condition 9.d. Delete the March 1, 2018.	The March 1, 2018 date was removed, and the condition was updated to reflect the standard SCDP template.
1-6	Conditions 3.c, 4.b, 4.d, 4.e, 4.f, 5.b, 5.d, 5.f and 11.b. Alternating Proprietors (AP) no longer share CCWS cellar space. Remove all requirements to monitor, record and report on AP operations.	The Alternating Proprietor (AP) monitoring, recording and reporting requirements have not been removed. This permit governs equipment owned by CCWS. As such, all operations of equipment subject to this permit must be reported by CCWS, regardless of who operates the equipment (CCWS or APs). The monitoring and recordkeeping requirements that pertain to the AP operations may be performed by either CCWS or the APs themselves. If the APs perform their own monitoring and recordkeeping, CCWS must ensure the APs provide them with the necessary information to satisfy the reporting requirements of this permit. This is consistent with how CCWS has been permitted since the initial permit was issued for the facility in 2009. If no AP operations occur in any of the equipment subject to this permit, CCWS may report zero usage for AP operations.
1-7	Except for the barrel room, the fees should be pro-rated against PTO 14696 since that permit contains the devices on the draft ATC permit.	Pro-rating is not applicable for determining the ATC permit evaluation fees. Fees for this ATC permit are assessed pursuant to Section I.B.1 of Rule 210. Fee Schedule A is used. The purpose of assessing fees is to capture the costs for the processing of the ATC permit and for SCDP activities. The equipment (tanks) subject to the permit are used to assess that fee. We will use pro-rating of the equipment fees at the time a PTO is issued for this project.

ATTACHMENT L
Wine Institute Comments on Draft Permit

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June 20, 2017

Via U.S. Mail and E-mail

Mr. Kevin Brown
Santa Barbara County Air Pollution Control District
260 North San Antonio Road, Suite A
Santa Barbara, California 93110

Re: Central Coast Wine Services
Draft ATC 15044
FID 11042; SSID 10834

Dear Mr. Brown:

I am writing on behalf of The Wine Institute to provide comments on the above-referenced draft Authority to Construct (ATC). This letter and the comments below are intended to fulfill the requirements of Santa Barbara County Air Pollution Control District (District) Rule 209 and California Health and Safety Code Section 42302.1 that The Wine Institute "appear[], submit[] written testimony, or otherwise participate[]" in the District's permitting process as a precondition to requesting a public hearing regarding the Central Coast Wine Services (CCWS) permit.

The Wine Institute's comments are focused on a narrow issue—whether the emissions control requirements imposed on CCWS with respect to VOC emissions from wine fermentation tanks have been "achieved in practice" and therefore qualify as "Best Available Control Technology" (BACT). For the reasons set forth below, the NohBell NoMoVo and EcoPAS emissions control systems (Emissions Control Systems) have not been "achieved in practice" and are therefore not BACT.

The Wine Institute has no objection to the issuance of an ATC to CCWS, and has no objection to CCWS's implementing the Emissions Control Systems voluntarily at its facility, to whatever extent it deems advisable, to comply with emissions limits imposed by the District. However, the draft ATC should be revised to remove any reference to the Emissions Control Systems being "achieved in practice" or BACT, because those statements are not supported by law or fact. 2-1

1. Background.

CCWS is a small, custom-crush winery. The draft ATC covers emissions from 40 small storage and fermentation tanks with capacities in the range of 350 to 21,200 gallons, plus an oak

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Wine Institute Comments on Draft Permit

barrel storage room. The Emissions Control Systems have been used sporadically at CCWS since 2013. CCWS uses two NohBell NoMoVo systems and one EcoPAS system. The NoMoVo systems are portable and may be moved from tank to tank. The EcoPAS system is not portable but is manifolded to ten tanks and may be connected or disconnected from any of those tanks by opening or closing manifold valves. 2-2

CCWS has used the Emissions Control Systems to maintain its daily emissions below its permitted daily emission limit of 54.99 lbs of VOCs. When daily uncontrolled emissions fell below that threshold, the Emissions Control Systems were not used. When daily emissions were likely to exceed that threshold, CCWS used the Emissions Control Systems on tanks of its choosing, sometimes using the systems for a day or two during a fermentation cycle, and sometimes using the Emissions Control Systems for longer periods. Some tanks were never connected to the Emissions Control Systems.

Under its current permit and for the purposes of preparing its application for ATC 15044, CCWS estimates its emissions by using emission factors for wine fermentation and then subtracting the amount of ethanol captured by the Emissions Control Systems. However, CCWS has not recorded how much ethanol has been captured by the Emissions Control Systems from any given tank. Nor has CCWS reported to the District which tanks were connected to the Emissions Control Systems, on what dates, and under what circumstances. CCWS's records reflect only the results of sporadic use of the systems on a series of unspecified tanks at unspecified times across the entire facility. 2-3

The draft ATC states that "CCWS proposed the use of the NoMoVo and EcoPAS emission capture and control systems as BACT for this project,"[1] but that statement is not accurate. As CCWS's permit application states, "The District ... has given instructions that CCWS should consider these technologies as BACT for this project."[2] 2-4

2. The BACT requirements.

Under State law and the District's Policy No. 6100.064.2017, BACT for any stationary source in a nonattainment area (which the District refers to as NAR BACT) is determined using the most stringent of three alternative standards. In this case, the District has determined that the Emissions Control Systems are BACT because they are: 2-5

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; ....

[1] Permit Evaluation for Authority to Construct 15044, section 1.1, at 2.
[2] Central Coast Wine Services, Authority to Construct Application, Process Description, at 2.

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Policy No. 6100.064.2017, § 3.1 (emphasis added.) This particular definition of BACT does not incorporate any consideration of economic or technical feasibility because "[t]he fact that a particular control technology is 'achieved-in-practice' implies its inherent economic and technological feasibility." Policy No. 6100.064.2017, § 5.0. It is thus of paramount importance that, before a finding of "achieved in practice" is made, the control technology has been implemented and used successfully under real-world conditions.

To be considered "achieved in practice," emissions controls must have "a proven 'track-record' of reliability." *Id.* at § 5.1. They must also be "effective overall [sic] operating ranges." *Id.* at § 8.1. "If BACT is required, then the permit must have a BACT permit condition. ... The condition should ... state that the specified BACT must be in place at all times of operation during the life of the project/permit." *Id.*

BACT emissions controls must be implemented through the specification of a "performance standard" and not "solely through the specification of the BACT control technology being employed." *Id.* The performance standard must be stated as a concentration, rate, removal efficiency or other applicable, enforceable, numerical standard. *Id.*

3. The Emissions Control Systems have not been "achieved in practice."

The Emissions Control Systems do not have a "proven track-record of reliability" for use over an entire fermentation cycle. The way to prove such a track-record is straight-forward: (1) attach the Emissions Control Systems to closed fermentation tanks before fermentation begins, (2) measure all inputs and outputs from the closed systems (including waste products), (3) analyze the resulting data to develop a performance standard, (4) conduct repeated tests of the systems under all likely conditions of use—including with different types of grapes and styles of wine—in order to validate the performance standard, and (5) document the testing. The draft ATC contains no documentation indicating that these steps have ever been performed. (Moreover, neither CCWS nor the District has developed any data regarding the effect on the quality of the wine of using the Emissions Control Systems over an entire fermentation cycle.) As a result, the Emissions Control Systems have not been shown to be "effective over all operating ranges." 2-6 2-7

Neither CCWS nor the District has any basis for accurately estimating a performance standard for the Emissions Control Systems. As noted above, CCWS estimates its emissions by using emission factors for wine fermentation, and then subtracting the amount of ethanol captured by the Emissions Control Systems. Although this approach is adequate for documenting compliance with permit conditions, the District has not developed an adequate performance standard or demonstrated that the technology has been achieved in practice. Uncontrolled emission rates from fermentation tanks may vary by factors of 2 or more, and therefore off-the-shelf emissions factors provide at best average emissions, and not actual 2-8

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emissions, from any specific tank. Even if the District had reliable data on uncontrolled emissions, there is no data regarding which tanks were subject to emissions controls, how much ethanol was captured from them or the time period that any controls were in place—essential information for assessing whether emissions reductions were achieved and quantifying them. Thus, there is no data from which a performance standard can be accurately determined for the Emissions Control Systems as applied to a tank over a complete fermentation cycle.

The absence of such information is especially significant for a facility such as CCWS, which provides winemaking services to multiple different vineyards and winemakers, producing wine from different varieties of grapes and in different styles. The emissions from these multiple types of wine have been shown to vary significantly. Although the mass-balance approach is a practical method of documenting compliance with the facility's permit limits, the District has not sufficiently developed a performance standard or data to support an "achieved in practice" determination.

CCWS's application for the draft ATC reflects the lack of any data to support a BACT determination. Although the manufacturers of the Emissions Control Systems have guaranteed that they will meet a 67 percent performance standard over an entire fermentation cycle, the EcoPAS guarantee does not apply to the first quarter of a fermentation cycle—EcoPAS specifically disclaims that its system will be effective during that period—and only applies in a specified vapor flow range. As the application notes in the BACT Analysis Summary Form for the EcoPAS system, the "Performance Standard" is "To Be Determined": 2-9

> EcoPAS has provided CCWS with a performance guarantee of 67%. **However this control efficiency has not been validated.** Limitations of the capture system were not taken into consideration. **Only with proper validation can a real control efficiency be assigned to this combination of vapor capture and ethanol extraction from the vapor stream....**

Application, Attachment B, at 1 (emphasis added). The application also notes that "This technology is not effective over all operating ranges" (and therefore fails to meet the requirements of the District's policy) and that "BACT will not be achievable during non-standard operations." *Id.* at 2. Under "Operating Constraints," the application states, "[t]o be determined." *Id.*

The capture efficiency of the NohBell NoMoVo system is similarly uncertain. NohBell presents a range of possible capture efficiencies from 45% to over 90%. The application notes that the Performance Standard of the NoMoVo system is uncertain:

> Performance Standard: To be Determined – NohBell has provided CCWS with a performance guarantee of 67.5%. However **this control efficiency has not been**

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> **validated**. Limitations of the capture system were attempted to be taken into consideration. **Only with proper validation can a real control efficiency be assigned to this combination of vapor capture and ethanol extraction from the vapor stream be assessed.**
>
> ....
>
> The performance of this technology is not consistent over the entire duration of a fermentation cycle. Absorption performance can vary from 45% to 90+% depending upon the timing of the fermentation cycle. Compound that variability with the normal insistent operations of the capture manifold, and **the actual variability of the control efficiency across all operating ranges [is] indeterminable.**

Id., Attachment C, at 1-2 (emphasis added). Just as with the EcoPAS system, the application notes that "Operating Constraints" are "[t]o be determined." *Id.*, Attachment C, at 2.

In its response to the draft permit, CCWS notes that the District agreed that the performance standard in the draft permit was essentially a placeholder, and that the actual control efficiency would be determined during the Source Compliance Demonstration Period. In effect, the District has decided to require the Emissions Control Systems so that their efficacy can be demonstrated by CCWS during its operations under the permit. If the Emissions Control Systems were "achieved in practice," then their effectiveness would have been demonstrated and the control efficiency would be known. If the efficiency of the Emissions Control Systems cannot even be reasonably estimated before implementation, those systems do not have a "proven track-record" and are not "achieved in practice." 2-10

The District's analysis in the draft permit of whether the Emissions Control Systems have been achieved in practice is conclusory. The District relies on an EPA letter, which does not provide any additional information regarding whether the Emissions Control Systems have been achieved in practice, and the use of the Emissions Control Systems at the CCWS facility. As documented above, the Emissions Control Systems have not been used consistently over all operating ranges at CCWS, and their effectiveness has not been documented on even a single tank. 2-11

4. The SJVAPCD has thoroughly analyzed whether the Emissions Control Systems have been "achieved in practice" and has concluded that they have not.

Notably absent from the District's BACT analysis is any discussion of the San Joaquin Valley APCD's thorough analysis of whether the Emissions Control Systems are "achieved in 2-12

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practice." In February 2015 and May 2016, the SJVAPCD published a memorandum on the subject "Achieved in Practice Analysis for Emission Control Technologies Used to Control VOC Emissions from Wine Fermentation Tanks." The SJVAPCD's memorandum, a copy of which is attached, is the only written analysis that thoroughly examines each use of the Emissions Control Systems to determine whether they are "achieved in practice." The SJVAPCD concludes that they are not.

The SJVAPCD's memorandum specifically examines the use of the Emissions Control Systems at the CCWS facility. The SJVAPCD concludes that the use of the Emissions Control Systems at CCWS has not shown those systems to be achieved in practice because:

- "The permit does not require continuous operation of the [Emissions Control Systems]."
- "The effectiveness of the [system] has only been estimated using ... a theoretical calculation of the quantity of ethanol that would be emitted if the tanks were uncontrolled. Inlet and outlet air quality testing has not been performed for this particular installation."
- "[T]he overall effectiveness of the system, including any ethanol re-emitted into the atmosphere during [waste] disposal, has yet to be sufficiently determined."
- "[T]he control technology has not been demonstrated to operate in a manner that would be required by BACT...."

All of these critiques are valid today and preclude the District from finding that the Emissions Control Systems have been "achieved in practice."

5. The District's Policies and Procedures require source testing to determine BACT.

The District's Policy and Procedure No. 6100.064.2017, Section 8.4, provides in part that "Source testing is required to ensure that the BACT performance standards and hourly mass emission rates are in compliance." This policy is subject to exceptions only in situations where other specified means of compliance may be used. Thus, to qualify for BACT, a technology must be subject to source testing or other equivalent means of demonstrating compliance.

The District has recognized that a "mass-balance" approach is not equivalent to a "source test" to demonstrate the effectiveness of the Emissions Control Systems. In a March 1, 2017 email, the Manager of the District's Engineering Division wrote to CCWS:

> Just wanted to share with you a conversation I had with EPA recently regarding winery emission control source testing. In particular, we discussed the CCWS

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> question and options, including a potential EPA study to evaluate source testing methodologies (a longer term project). In the meantime, EPA provided us guidance that source testing using the mass balance calculations currently in place would be an acceptable compliance tool in lieu of traditional inlet/outlet source testing. Once complete, we would utilize EPA's test method for new projects. ...

The District's email implicitly acknowledges that source testing is feasible, because EPA plans to perform such testing and the District plans to use EPA's method when it is developed. The District's email also recognizes that "mass balance calculations" are a stop-gap until inlet/outlet source testing is conducted. Once that testing is conducted, the District will use the source testing for "new projects." 2-13

If source testing will be performed in the future to demonstrate the effectiveness of the Emissions Control Systems, that testing should be done before concluding that the systems are effective and achieved in practice. As the SJVAPCD notes, NohBell and EcoPAS's refusal to conduct source testing raises significant questions and concerns regarding their control efficiency claims:

> The refusal of the control vendors to demonstrate the actual control efficiency raises significant questions and concerns over the vendors' control efficiency claims. The Valley Air District cannot, in good faith, require controls which the vendors refuse to validate. The District's concern is that, if the vendors of this technology are aware that claims of the control efficiency are potentially overstated, but they also know that EPA is about to require their technology to be installed on a widespread basis, they gain no advantage by demonstrating their actual control efficiency. Since the effectiveness was yet again not demonstrated in 2015, and for the reasons stated in the 2013 evaluation of the use of controls at CCWS, the criteria of Achieved in Practice have yet to be satisfied for these installations.

The "mass-balance" calculations that the District proposes to use to estimate the effectiveness of the Emissions Control Systems are subject to considerable variability and should not be the basis for a determination that the Emissions Control Systems have been "achieved in practice." As EPA has noted, emissions factors for wineries "are generalized. There is a great deal of variation in parameters and emissions. Actual emissions may be much higher or lower."[3] Both the manufacturers of the Emissions Control Systems and the District recognize that source testing should be performed. As recently as February 2017, EcoPAS proposed that the District support EPA funding of source testing and admitted that "a solid assessment of actual emissions factors and inventory is long overdue." The District has not determined accurately the 2-14

[3] US EPA, Inventory Guidance and Evaluation Section, VOC Emissions from Wineries (March 10, 1992).

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efficiency of the Emissions Control Systems, or specified a practical, enforceable performance standard.

6. Conclusion

As noted above, the District's own policies acknowledge that an "achieved in practice" determination is a substitute for a determination that a particular control technology is both economically and technically feasible: "The fact that a particular control technology is 'achieved-in-practice' implies its inherent economic and technological feasibility." Policy No. 6100.064.2017, § 5.0. The District has not sufficiently performed and documented an achieved in practice assessment. The District has not assessed and documented comprehensive reliability data. The Emissions Control Systems did not operate over the entire operating range needed for the application, and the permit does not specify an adequately documented performance standard for the systems. The regulated community should not be required to use technology that has never been used under the same conditions as BACT and has not been demonstrated to be effective. 2-15

The Wine Institute has no objection to the District's issuing an ATC to CCWS that permits the proposed facilities and that provides, with CCWS's agreement, for the use of the Emissions Control Systems. However, those systems have not been "achieved in practice" and are not BACT, and all references to such systems as "achieved in practice" or BACT should be removed from the draft permit.

Very truly yours,

R. MORGAN GILHULY

Authority to Construct 15044

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Wine Institute Comments on Draft Permit

SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT MEMO

DATE: February 9, 2015 (Revised May 9, 2016)

TO: Dave Warner, Deputy APCO

FROM: Nick Peirce, Permit Services Manager
James Harader, Senior Air Quality Engineer
Jag Kahlon, Air Quality Engineer

SUBJECT: Achieved in Practice Analysis for Emission Control Technologies Used to Control VOC Emissions from Wine Fermentation Tanks

Introduction

The purpose of this analysis is to determine whether there is any control technologies that can be considered to be Achieved in Practice BACT for controlling fermentation VOC emissions from wine fermentation tanks. If determined to be achieved in practice, the San Joaquin Valley Air Pollution Control District (District) would require the use of such technology for wine fermentation tanks when BACT is triggered, without any consideration of the cost effectiveness of the control technology. The District's achieved in practice BACT is functionally equivalent to Federal EPA's Lowest Achievable Emission Rate requirements outlined in Federal Non-Attainment NSR documents.

LAER

The emission control requirement for new Major Sources and Federal Major Modifications in non-attainment areas is that the emission units meet the lowest achievable emission rate (LAER). LAER is the most stringent emission limitation from either of the following:

1. The most stringent emission limitation contained in the implementation plan of any State for such class and category of source; or
2. The most stringent emission limitation achieved in practice by such class or category of source.

In no event can the LAER requirement be less stringent than Federal New Source Performance Standards (NSPS), if there is an NSPS applicable to the type of source being evaluated.

In the case of wine fermentation tanks, the District did not identify any SIP that would require the use of add-on control systems. Therefore, add-on control

systems can only be required as LAER for wine fermentation if they are determined to be achieved in practice for the source category.

Achieved In Practice Criteria

The term "achieved in practice" appears to be subject to interpretation since it is not defined in the federal statutes or regulations. As a result, there are few objective regulatory criteria to constrain the form of an achieved in practice determination. The following discussion outlines the achieved in practice criteria that is used by the District for determining LAER.

In a February 28, 1989 memorandum titled "Guidance on Determining Lowest Achievable Emission Rate (LAER), EPA provided the following guidance concerning the economic feasibility of LAER:

> *Traditionally, little weight has been given to economics in LAER determinations, and this continues to be the case. The extract in your memorandum from the record of the House and Senate discussion of the Clean Air Act (Act) contains the sentence:*
>
> > *"If the cost of a given control strategy is so great that a new major source could not be built or operated, then such a control would not be achievable and could not be required by the Administrator."*
>
> *We interpret this statement in the record to be used in a generic sense. That is, that no new plants could be built in that industry if emission limits were based on levels achievable only with the subject control technology. However, if some other plant in the same (or comparable) industry uses that control technology, then such use constitutes de facto evidence that the economic cost to the industry of that technology control is not prohibitive. Thus, for a new source in that same industry, LAER costs should be considered only to the degree that they reflect unusual circumstances which, in some manner, differentiate the cost of control for that source from the costs of control for the rest of that industry. These unusual circumstances should be thoroughly analyzed to ensure that they really do represent compelling reasons for not requiring a level of control that similar sources are using. Therefore, when discussing costs, applicants should compare the cost of control for the proposed source to the costs for source(s) already using that level of control.*

The statement *"If some other plant in the same (or comparable) industry uses that control technology, then such use constitutes de facto evidence that the*

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economic cost to the industry of that technology control is not prohibitive" is only true if the plant using that control technology purchased or leased that control technology. Scenarios where the purchase/lease of the control technology was subsidized with grant money, or where the plant allowed the control vendor to operate and test their equipment on-site without actually purchasing/leasing the control technology do not constitute evidence that the economic cost to the industry due to use of that technology control is not prohibitive. Therefore, the District's historical position is that a control technology must have been purchased or leased by the plant in order for that installation of the control technology to be considered as achieved in practice.

EPA Region IX has previously stated that the successful operation of a new control technology for six months constitutes achieved in practice. This position was established in an August 25, 1997 letter from David Howekamp of US EPA Region IX to Moshen Nazemi of South Coast Air Quality Management District. This guidance is reflected in the South Coast Air Quality Management District's BACT Policy, which includes the following criteria for determining whether a control technology is achieved in practice:

> *Reliability: All control technologies must have been installed and operated reliably for at least six months. If the operator did not require the basic equipment to operate daily, then the equipment must have at least 183 cumulative days of operation. During this period, the basic equipment must have operated: 1) at a minimum of 50% design capacity; or 2) in a manner that is typical of the equipment in order to provide an expectation of continued reliability of the control technology.*

For wine fermentation tanks, the District has taken the position that successful operation of a control device for one full fermentation season is satisfactory for qualifying a control as achieved in practice. The requirement of one full fermentation season is considerably more conservative than the 6-month requirement, since the fermentation season typically lasts only two to three months.

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The term "successful operation" is not tightly defined. The District considers the following when determining whether a control technology has been successfully operated for achieved in practice BACT determinations:

1. Was the control technology operated in the same manner that would be required by the District if the control technology was required for BACT?
2. How reliable has the control technology been over the life of its use?
3. Has the control technology been verified to perform effectively over the range of operation expected for that type of equipment? Was the effectiveness verified by performance test(s), when possible, or using other performance data?

Other typical considerations that the District considers when making an achieved in practice BACT determination include:

1. Is the control technology commercially available from at least one vendor?
2. On what class and category of source has the control technology been demonstrated?

In summary, the following criteria are used for determining whether a control technology is achieved in practice for wine fermentation:

1. Did the plant using the control technology purchase/lease the equipment? Was that purchase/lease subsidized?
2. Was the control technology operated for at least one fermentation season?
3. Was the control technology operated in the same manner that would be required by the District for BACT purposes?
4. How reliable has the control technology been during its use at the plant?
5. Has the control technology been verified to perform effectively over the range of operation expected for that type of equipment? Was the effectiveness verified by performance test(s), when possible, or other performance data?
6. Is the control technology commercially available from at least one vendor?
7. On what class and category of source has the control technology been demonstrated?

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Achieved in Practice Analysis for Known Installations of Wine Fermentation Control Technologies

The following is an analysis of each known installation of an emission control technology to control VOC emissions from wine fermentation tanks and whether that installation can be considered achieved in practice.

Terravant Wine Company (2008 – Current)

Terravant Wine Company submitted an Authority to Construct application for a wine processing facility to the Santa Barbara County Air Pollution Control District (SBCAPCD) on September 20, 2007. The application was deemed complete on October 19, 2007. The fermentation tanks triggered BACT; however, the SBCAPCD evaluation determined BACT to be infeasible. However, this project also triggered offsets and Terravant Wine Company electively proposed to install a packed bed water scrubber with UV/hydrogen peroxide controls to control VOC emissions from the wine fermentation tanks. Proposing the control would reduce VOC emissions to a level below the SBCAPCD offset threshold. The control technology is only required to run sufficiently to reduce emissions to stay below the offset threshold – it is not required to be operated all of the time, as is BACT-required equipment.

The packed bed water scrubber was installed in 2008 and began operation in 2008, with a 95% control efficiency requirement on the Authority to Construct permit. However, in 2008, the unit failed to meet the 95% control efficiency requirement. Prior to the 2009 season, Terravant Wine Company was issued a revised Authority to Construct permit that reduced the control efficiency requirement to 75%. However, the unit has not been able to consistently demonstrate compliance with the 75% control efficiency requirement. The effectiveness of the packed bed scrubber has varied considerably over its life, and has been measured to be as low as 49% control efficiency. During discussions, SBCAPCD staff indicated that this facility has been issued a Notice of Violation for non-compliance with their permitted emission limits and they would not recommend that any wineries use this control technology for the control of fermentation tank emissions, as it has proven to be unreliable. Finally, the control technology used by Terravant Winery is custom designed, and is not a commercially available off-the-shelf type of unit.

The packed bed scrubber technology does not meet the achieved in practice criteria since this control technology has not been operating in compliance with its permit requirements, its effectiveness is highly variable, and the control technology is not commercially available.

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EcoPAS, LLC (2009)

EcoPAS conducted testing of their passive alcohol system, which is consendation-based emission control system, at a winery located within the San Luis Obispo County Air Pollution Control District. The purpose of this installation was to conduct full-scale testing of the passive alcohol system on red wine fermentation tanks. The District was unable to verify whether the winery purchased the system.

Since the District could not verify that the winery purchased the control system, this installation doesn't meet the first criteria listed to be considered as achieved in practice. Furthermore, the unit was operated for experimental testing of the control device. In the District's experience, during experimental testing/trial runs, a control technology does not typically operate in the same manner as would be required by BACT, so the District has not historically considered experimental test/trial installations to constitute achieved in practice BACT.

Central Coast Wine Services (2009)

In 2009, Santa Barbara County Air Pollution Control District (SBCAPCD) determined that Central Coast Wine Services (CCWS) was operating without a permit. They required CCWS to submit an application for an Authority to Construct such that the winery would be in compliance with SBCAPCD Rules and Regulations. Based on the emission estimates for the facility, the facility was triggering Best Available Control Technology Requirements and Offsets. At that time, the SBCAPCD determined that BACT, while technologically feasible, was not cost effective. SBCAPCD issued an Authority to Construct/Permit to Operate on June 5, 2009 for the winery.

CCWS was allowed to exceed the offset thresholds during the fall 2009 harvest season in order to test potential control technologies. Three companies were invited to participate in testing of prototype emission control equipment, but only NohBell Corporation elected to install and test fugitive ethanol control equipment.

NohBell Corporation engineered and tested a full scale NoMoVo 1.0 system on a 50 ton tank at the CCWS plant. NoMoVo documents describe the equipment as successful, with full scale trials proceeding. After the 2009 season, NoMoVo documents indicate that CCWS decided to move the plant and equipment.

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This installation does not meet the requirements to be considered achieved in practice. First, the facility does not appear to have purchased/leased the control system, nor did they intend to continue operating the system. This is evident by their decision to discontinue use of the system in the following year. Second, no data has been submitted to the District to demonstrate that the unit was continuously operated in the same manner that the District would require the system to operate if it were considered achieved in practice BACT. The purpose of this installation was to perform initial testing and trial runs of the control technology. In the District's experience, during experimental testing/trial runs, a control technology does not typically operate in the same manner as would be required by BACT, so the District has not historically considered experimental test/trial installations to constitute achieved in practice BACT. Furthermore, the type of records necessary to demonstrate continuous operation of the system was not required by the SBCAPCD permit. Finally, the SBCAPCD permit did not include testing requirements to sufficiently demonstrate the effectiveness of the system.

Kendall Jackson Oakville (2010)

Kendall Jackson Winery belongs to Jackson Family Wines Inc (JFW), and is located in Oakville, California. This winery is in Bay Area Air Quality Management District (BAAQMD). BAAQMD does not require permits for wine fermentation or storage operations. Their Regulation 2, Rule 1, 117.9 and 117.10 has exemptions for wine storage and fermentation operations.

In 2010, NohBell installed a NoMoVo 2.0 system at the Kendall Jackson Winery. The system was connected to a 10,000 gallon fermentation tank and operated on a trial basis during the 2010 crush season. Pursuant to Brian Kosi, Winemaker at Kedall-Jackson Oakville, JFW never purchased the NoMoVo technology. The NoMoVo slurry was treated by the facilities on-site wastewater treatment system.

This installation does not meet the requirements of achieved in practice BACT. First, the system was never owned/leased by the winery. Secondly, the unit was operated for the purposes of testing/trial runs to evaluate the control technology. In the District's experience, during experimental testing/trial runs, a control technology does not typically operate in the same manner as would be required by BACT, so the District has not historically considered experimental test/trial installations to constitute achieved in practice BACT. Furthermore, BAAQMD does not have any record of source tests occurring during the 2010 crush season; therefore, the effectiveness for this installation was not established.

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Kendall Jackson Oakville (2011-2013)

In its 2010 clean air plan, the BAAQMD included a further study measure (FSM 14 – Winery Fermentation) to examine whether ethanol emissions from Bay Area wine production could be cost-effectively reduced. On 9/26/11, the BAAQMD signed a Research Sponsorship Agreement (Contract No. 2011-126) with NohBell to help develop its technology to capture volatile organic compounds emitted by wine fermentation tanks at Kendall Jackson Oakville. The contract states that *"District (BAAQMD) wishes to support NohBell's effort to demonstrate the technology at JFW winery and wishes to verify the function and cost-effectiveness of the technology and acquire data to help DISTRICT (BAAQMD) determine whether the equipment could be cost effectively employed more widely in the wine industry"*. NoMoVo submitted a project budget estimate of $118,750 for its NoMoVo 2.0 upgrades, pump upgrades, and related work at the plant. The BAAQMD contract promised $50,000 towards this effort, to be paid in installments directly to NohBell Corporation. Furthermore, Brian Kosl of Kendall-Jackson Oakville confirmed that the facility never purchased the NoMoVo system from NohBell and confirmed that the system has been removed from the site by NohBell.

For 2011, NohBell Corporation planned to conduct trials of the upgraded NoMoVo 2.0 system on 10 fermentation tanks. Six to eight trials were anticipated, operating on 4-6 day cycles. The trial runs were scheduled to be primarily conducted while fermenting red wines. The District was unable to obtain operational data for the 2012 and 2013 fermentation seasons for this equipment. Following the 2013 crush season, the equipment was removed and transferred to Constellation Wines in Monterey, CA.

This installation does not pass the first criteria of LAER, since the facility never owned the system and since the installation and operation of the control technology by NohBell was subsidized by a Research Sponsorship Agreement with BAAQMD. Furthermore, operation of the control technology at this facility was for trials/testing of the effectiveness of the control technology. In the District's experience, during experimental testing/trial runs, a control technology does not typically operate in the same manner as would be required by BACT, so the District has not historically considered experimental test/trial installations to constitute achieved in practice BACT. Finally, the unit was removed, which indicates that this wasn't intended as a permanent installation. For these reasons, the District does not consider this installation to be achieved in practice.

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J. Lohr Vineyard and Winery (2013)

NohBell Corporation has indicated that they operated a NoMoVo system at J. Lohr Winery in Paso Robles during 2013 crush season. The District contacted J. Lohr Winery to obtain more information regarding this installation. J. Lohr Winery personnel stated that they considered this to be a pilot type testing operation. J. Lohr Winery did not purchase or lease the system. The unit operated during the 2013 crush season on fermentation tanks that were processing red wine. After the 2013 crush season, the system was removed and no longer operates at this site. San Luis Obispo Air Pollution Control District (SLOAPCD) had no knowledge that this unit was installed at this winery and no Authority to Construct or permit exemption was issued for this equipment.

This installation does not pass the first criteria of LAER, since the facility never purchased/leased the equipment. Furthermore, operation of the control technology at this facility was for trials/testing of the effectiveness of the control technology at this facility. In the District's experience, during experimental testing/trial runs, a control technology does not typically operate in the same manner as would be required by BACT, so the District has not historically considered experimental test/trial installations to constitute achieved in practice BACT. Finally, the unit was removed, which indicates that this wasn't intended as a permanent installation. For these reasons, the District does not consider this installation to be achieved in practice.

Constellation Winery dba Gonzales Winery (2013)

During the 2013 crush season, a NoMoVo unit was installed on a 39,000 gallon fermentation tank at Constellation Brands U.S. Operations, Inc. dba Gonzales Winery in Monterey, CA. The control technology was installed and operated as a "pilot operation". Monterey Bay Unified Air Pollution Control District (MBUAPCD) compliance staff noticed the NoMoVo unit operating on-site without authorization from MBUAPCD and issued a notice of violation. Gonzales Winery submitted an Authority to Construct application; however, prior to processing that application, the facility notified MBUAPCD that the equipment had been removed from the site. The equipment operated at the site for a partial season for pilot testing purposes. MBUAPCD could not verify whether Gonzales Winery purchased or leased the equipment.

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The District was unable to verify whether Gonzales Winery purchased or leased the NoMoVo unit. Furthermore, operation of the control technology at this facility was for trials/testing of the effectiveness of the control technology at this facility. In the District's experience, during experimental testing/trial runs, a control technology does not typically operate in the same manner as would be required by BACT, so the District has not historically considered experimental test/trial installations to constitute achieved in practice BACT. Finally, the unit was removed, which indicates that this wasn't intended as a permanent installation. For these reasons, the District does not consider this installation to be achieved in practice.

Vinwood Cellars Kenwood (2013)

The District has found documents indicating that a NoMoVo system was installed on four 15,000 gallon fermentation tanks at Vinwood Cellars Kenwood in Sonoma county, and the system was operated during the 2013 season. District staff attempted to contact Vinwood Cellars; however, the staff at Vinwood Cellars was unable to verify information for this installation. BAAQMD had no knowledge of this installation, as they do not require permits for wine tanks, so they were unable to verify this installation. Furthermore, since this installation was not subject to permit requirements, BAAQMD has no operational history or test data for this site. While BAAQMD administered source tests at Kendall Jackson Oakville winery, they have no records of any source testing of the NoMoVo system at Vinwood Cellars Kenwood.

This installation has not met the requirements of achieved in practice. First, it has yet to be confirmed that the winery actually purchased the NoMoVo system. Second, BAAQMD has no test records to verify the effectiveness of the NoMoVo system at this site. Finally, the operational history of the unit at this site is not available to determine whether it was operated in the same manner as a unit would be if it were installed as BACT.

Central Coast Wine Services (2013)

On August 5, 2013, CCWS electively applied to install a NoMoVo wine emission capture and control system to control ethanol emissions from fermentation activities at their wine center. The existing fermentation tanks at the facility ranged in capacity from 350 gallons to 20,887 gallons. On September 23, 2013, a final ATC (ATC 14257) was issued for the installation of the NoMoVo system, and the unit began operation in September 27, 2013. The installation of this unit allowed CCWS to increase daily wine fermentation while remaining under their existing daily and annual facility-wide VOC emission limits. A Permit to Operate (PTO 14257) was issued on December 13, 2013.

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PTO 14257 states: "*The NoMoVo system is optional and may be used at CCWS' discretion*". Thus, the permit does not require continuous operation of the NoMoVo system. The NoMoVo system is portable. The system can be attached to four or five fermentation tanks at a time via flexible hoses. The facility is allowed to move the NoMoVo system around, as desired, to capture emissions from the tanks where fermentation is taking place. However, there is no requirement to keep the NoMoVo system attached to a tank and operate it for the full fermentation cycle of that tank. Thus, the District was unable to confirm that the unit was operated in the continuous manner that would be required if the District considered NoMoVo to be achieved in practice BACT.

SBCAPCD PTO 14257 does not include a control efficiency requirement, does not include any source testing requirements to verify the control effectiveness of the control system. The effectiveness of the control has only been estimated using the density change of the NoMoVo slurry to estimate the quantity of ethanol capture, and using a theoretical calculation of the quantity of ethanol that would be emitted if the tanks were uncontrolled. Inlet and outlet air quality testing has not been performed for this particular installation.

Finally, the disposal of the NoMoVo slurry is an important consideration when determining the effectiveness of the control system. If the slurry is disposed of in a manner that re-emits the ethanol into the atmosphere, then the effectiveness of the control is diminished. Until August 2014, the CCWS facility disposed of the NoMoVo slurry in their on-site wastewater treatment facility. On August 21, 2014, SBCAPCD sent a letter to CCWS informing them that they have concerns over the treatment of the NoMoVo slurry. Specifically, SBAPCD was concerned about the potential for stripping of ethanol to the atmosphere during the on-site waste water treatment process. The SBCAPCD letter states "*In conclusion, after August 29, 2014, the District will not recognize emission reductions claimed based on the use of any of your NoMoVo systems (existing or new) at the facility until CCWS has a District-approved on-site or off-site ethanol disposal method in place*". On August 27th, 2014, SBCAPCD approved the disposal of the NoMoVo slurry at Southern California Waste Water, an off-site facility in Santa Paula, California. In November, 2014, a vacuum truck carrying toxic chemicals from an unrelated facility exploded spreading about 1200 gallons of chemical waste including sulfuric acid and highly combustible organic peroxide. Since that incident, Southern California Waste Water has discontinued the acceptance of waste from all of their clients, so this disposal option is no longer available for the waste generated by CCWS.

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The waste is now shipped to a distillery, which distills the ethanol and converts it into vehicle fuel. SBCAPCD has yet to approve the disposal of the NoMoVo slurry to the on-site wastewater facility. Consequently, the overall effectiveness of the system, including any ethanol re-emitted into the atmosphere during disposal, has yet to be sufficiently determined.

Since the control technology has not been demonstrated to operate in a manner that would be required by BACT and the overall effectiveness of the control technology has yet to be sufficiently determined, the District does not consider this installation to be achieved in practice.

Central Coast Wine Services (2014/2015)

In 2014, CCWS submitted an Authority to Construct application for the installation of 40 new tanks, ranging in capacity from 7,407 gallons to 20,628 gallons. The proposal triggered BACT. CCWS decided to forego the normal BACT Analysis, and electively proposed to install six NoMoVo systems to control VOC emissions from the tanks, when the tanks were fermenting wine. A final ATC, (ATC 14350) was issued on July 28, 2014 and the tanks were installed for the 2014 season.

Unlike the previous installations of NoMoVo at this facility, the ATC requires use of the NoMoVo system on these tanks while fermentation is taking place, the permit requires a minimum capture and control efficiency, and the permit requires source testing to verify the effectiveness of the NoMoVo system. However, these tanks have yet to be used for fermentation and the effectiveness has yet to be determined for this installation of the NoMoVo system. An email from Richard Mather of CCWS to David Harris of SBCAPCD, dated September 16, 2014, states:

> *We won't be using the new tanks for fermentation this year, but since our ATC permit only gives us until August 1, 2015 to fulfill the source test plan, we will need to conduct the test this fall before our last fermentation. It would be highly unlikely that we would be conducting fermentation next year before August 1. Since harvest is progressing rapidly, we probably only have several weeks of fermentation left this year.*

Prior to the 2015 season, CCWS received another Authority to Construct for the 40 new tanks that allowed the use of either NoMoVo or EcoPAS control systems. The new Authority to Construct continued to require inlet/outlet testing of the control system. However, that Authority to Construct was later cancelled due to both technology vendors objecting to perform the required source tests to demonstrate the control efficiency of their respective systems. Rather, CCWS was issued a new ATC allowing only 10 of the 40 tanks to be used for fermentation, and limiting

fermentation to white wine only. With those changes to the permits, BACT was no longer triggered and the requirement to demonstrate the actual control efficiency was removed from the permits. Additionally, the use of the NoMoVo or EcoPAS control systems was no longer required; rather, the permit allowed for optional use on the 10 tanks that are allowed to ferment white wine.

The refusal of the control vendors to demonstrate the actual control efficiency raises significant questions and concerns over the vendors' control efficiency claims. The Valley Air District cannot, in good faith, require controls which the vendors refuse to validate. The District's concern is that, if the vendors of this technology are aware that claims of the control efficiency are potentially overstated, but they also know that EPA is about to require their technology to be installed on a widespread basis, they gain no advantage by demonstrating their actual control efficiency. Since the effectiveness was yet again not demonstrated in 2015, and for the reasons stated in the 2013 evaluation of the use of controls at CCWS, the criteria of Achieved in Practice have yet to be satisfied for these installations.

Conclusion

For the reasons listed in the above discussions of each control installation, none of the installations have met all of the criteria necessary for the control technology to be considered as achieved in practice BACT or federal LAER.

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The following are the District's responses to comments on the draft permit by the Wine Institute in a letter dated June 20, 2017. The comments are summarized from the Wine Institute letter. The referenced item numbers correspond to the item numbers identified in the right hand margin of the comment letter in Attachment L.

Item	Summarized Comment	Response
2-1	The draft ATC should be revised to remove any reference to the Emission Control Systems as being declared "achieved in practice" or BACT.	The District disagrees with the assertions made by the commenter. Best Available Control Technology (BACT) is triggered for this ATC permit pursuant to District Rule 802.D. In implementing BACT for our New Source Review program, we primarily follow our rules, policies and input from oversight agencies such as EPA and ARB. We also review other air agency BACT determinations. Our goal is to implement the mission of the agency, which is to protect the people and the environment of Santa Barbara County from the effects of air pollution, including emissions from large Wine Centers such as Central Coast Wine Services (CCWS). The District has determined that the proposed emission control systems[1] are achieved in practice BACT for this project.
2-2	Central Coast Wine Services (CCWS) is a **small winery**, using 40 **small tanks**, and the Emission Controls Systems have been used **sporadically** at CCWS since 2013. {**emphasis added**}	The commenter is inaccurate with the facts regarding the background. CCWS is not a "small" winery. Small implies a typical low production boutique winery that is prevalent throughout the region. In Santa Barbara County alone, there are over 200 wineries. Due to their size, only 17 of these require permits with the District. Moreover, of these, CCWS, Terravant and Cambria are by far the largest. CCWS and Terravant are both similar custom crush wine centers. A recent news article[2] identifies Terravant as the 65th largest winery in the United

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

[2] Matt Kettmann, "Fine Dining and DIY at Bottlest", Santa Barbara Independent, June 22, 2017.

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		States. With over 9,000 wineries bonded in the U.S., that puts Terravant in the top 1%. CCWS's proposed fermentation capacity and their current production totals match or exceed that of Terravant's. Therefore, labelling CCWS a "small" winery is inaccurate. For tankage, CCWS will have a permitted capacity for fermentation of 1,438,226 gallons using 149 tanks ranging in size from 5,000 gallons to 21,000 gallons each. Again, this is clearly not "small". Lastly, we note that CCWS has utilized emission control systems every year since 2013 and has lease agreements to continue the use of these systems through 2017. Daily records kept by CCWS show that this equipment was used in a continuous manner when necessary to meet their permit limits. That is not "sporadic". Webster's defines sporadic as "occurring occasionally, singly, or in irregular or random instances". CCWS did not utilize these emission control systems in irregular, random or occasional fashion. To the contrary, the emission control systems were utilized on a frequent basis for the specific goal of reducing the daily emissions of ethanol throughout the fermentation season.
2-3	CCWS has not recorded how much ethanol has been captured from any given tank. Nor has CCWS reported which tanks were connected to the Emissions Control Systems, on what dates and under what circumstances. CCWS's records reflect on the results of sporadic use of the systems on a series of unspecified tanks at unspecified times across the entire facility.	The District disagrees with the assertions made by the commenter. It is not relevant how much ethanol was captured from each tank, which specific tanks were connected to the emission control systems, or the dates that a specific tank was connected. The basis for the existing permit was to ensure compliance with daily emission limits by estimating uncontrolled emissions from the facility along with measuring the mass of ethanol collected by each of the emission control systems. Similarly, the basis for the proposed permit is to use a mass balance approach to quantify the control efficiency of the emission control systems by estimating uncontrolled emissions from the facility along with measuring the mass of ethanol collected by each of the

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		emission control systems. As long as this approach is consistently applied, reasonably accurate results will be obtained. CCWS is required to track the emissions on a daily basis using this proven mass balance calculation. As explained is Response 2-2 above, the control systems were not used in a sporadic manner, and CCWS's records show long and consistent periods of continuous operation of the emission control systems.
2-4	The statement in the draft ATC that "CCWS proposed the use of the NoMoVo and EcoPAS emission capture and control systems as BACT for this project" is not accurate. CCWS's permit applications states, "The District …has given instructions that CCWS should consider these technologies as BACT for this project".	During our pre-application meeting with CCWS, the District provided CCWS guidance as to what BACT would be for their project. This is standard operating practice, and is detailed in Section 6.0 *BACT Selection Process*, of District Policy and Procedure No. 6100.064.2017 *Best Available Control Technology*. At the time of the March 28, 2017 pre-application meeting, the three emission control systems were posted to the CARB BACT Clearinghouse as achieved in practice technologies. We also provided CCWS copies of EPA's September 30, 2016 letter stating that all three emission control systems were considered achieved in practice. CCWS took this guidance and prepared a permit application in which they proposed the use of two of the three achieved in practice technologies identified emission control systems for their project. The application states, "Accordingly, CCWS agrees that one of these controls will be in place any time fermentation is occurring in a 400-series tank". CCWS understood what they were applying for and why, which is punctuated by the fact that their comment letter on the draft ATC did not raise the proposed emission control equipment being considered achieved in practice BACT as an issue. Further, in an e-mail sent July 24, 2017, CCWS made the

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		following statement: "Although the Wine Institute has written a letter contesting BACT, CCWS did not challenge the BACT requirement."
2-5	Under State law and the District's Policy No. 6100.064.2017, BACT for any stationary source in a nonattainment area (which the Districts refers to as NAR BACT) is determined using the most stringent of three alternative methods.	The District would like to clarify that our BACT requirements are specified in our Rule 802, Section D. There is no State law that defines BACT for our New Source Review program. Our Policy and Procedure No. 6100-064-2017 provides additional guidance for implementing our BACT program.
2-6	The Emission Control System do not have a "proven track-record of reliability" for use over an entire fermentation cycle.	The District disagrees with this assertion. As noted in Policy and Procedure No. 6100-064-2017, Section 5.1.(a), the standard for assessing a control system's "track-record" of reliability is tied to what we term "a reasonable time period". In this particular case, NoMoVo emission control systems have been effectively used at the CCWS facility since 2013. That equates to four fermentation seasons of effective use with no reported issues regarding the reliability of the system to perform its function. Further, the EcoPAS emission control system has been effectively used at the CCWS facility for two fermentation seasons with no reported issues regarding the reliability of the system to perform its function. Our achieved in practice standard of having a "proven track record" has been met. The comment that an entire fermentation cycle was required to meet the "proven track-record" criteria is not relevant in this situation. For both emission control systems, CCWS was not required to operate the systems during the entire fermentation process, as their goal was to utilize the control systems to ensure compliance with permit emission limits. A typical fermentation process starts with high levels of carbon dioxide (CO_2) generation and low levels of ethanol generation. As the fermentation process progresses the reverse occurs with CO_2 levels

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		dropping and ethanol levels increasing. As such, if the situation warranted, CCWS was free to disconnect the emission control system if their expectation of potential ethanol emissions was lower than the permit limit. Operating in this manner had no impact of the reliability of the control system to collect ethanol. Further, CCWS's daily tracking records show numerous instances where both the NoMoVo and EcoPAS systems were operated for long periods while connected to multiple tanks in different states of fermentation. There is no technical basis for discounting the effectiveness of these emission control systems simply because CCWS was allowed to operate them in the manner described above. These control systems are designed for continuous operation, and their operation at CCWS since 2013 proves that. Again, our achieved in practice standard of having a "proven track record" has been met.
2-7	The commenter recommends a 5-step process to establish a proven track record of reliability and notes that the ATC does not contain any documentation that these 5 steps have been performed. The commenter also notes the lack of data regarding the effect on the quality of the wine when using the Emission Control Systems over an entire fermentation cycle. The way to prove such a track-record is straight-forward: (1) attach the Emission Control Systems to closed fermentation tanks before fermentation begins, (2) measure all inputs and outputs from the closed systems (including waste products), (3) analyze the resulting data to develop a performance standard, (4) conduct repeated tests of the systems under all	Establishment of a different review process is unnecessary. The NoMoVo and EcoPAS technologies have already proven their ability to capture and control ethanol emissions from the wine fermentation tanks at the CCWS facility since 2013 and 2015, respectively. These emission control systems meet our achieved in practice standard of having a "proven track record" (see Response 2-6 above). To date, no winery in California has been required to implement BACT for a new or modified stationary source under a New Source Review permit. BACT is designed as an ever-evolving program. This allows the District to review and require new technologies and/or advancements in existing technologies. The wine industry has reached the point where emission control technology is available and has proven its effectiveness. The NoMoVo, EcoPAS and Terravant

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	likely conditions of use – including with different types of grapes and styles of wine – in order to validate the performance standard, and (5) document the testing.	technologies are first generation emission control systems. All three technologies have many years of real world operation. As noted by EPA in their September 30, 2016 letter to the SJVAPCD, these three control technologies are achieved in practice. The commenter advances a valid point regarding the need to continue the evaluation of emission control technologies used for wineries. This evaluation will provide wine makers and emission control vendors with more information to better enhance and refine their processes and technologies. We encourage affected parties and the Wine Institute to work together in pursing this positive and proactive goal for future generations of emission controls. Lastlythe commenter provides no evidence that use of an emission control device affects the quality of the wine. These systems are "passive" and thus the behavior of the fermentation process is not impacted. Further, these control systems have been in operation since 2013 (2008 for Terravant) and there have been no reports of wine quality issues. CCWS is a custom crush wine center that creates wine for many companies. They have produced many cases of wine since 2013 using tanks connected to the control systems. There are many variables that affect the quality of wine, however, experience at CCWS shows that use of a passive emission control system on the fermentation tank is not one of them. Most importantly, CCWS never raised an issue of the effect of the control systems on wine quality at any point in the permitting process.
2-8	There is no basis for accurately estimating a performance standard for the Emission Control Systems. There is no data	We do not concur. The emission standard selected is based on vendor guarantees. The District reviewed these guarantees against actual data

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	from which a performance standard can be accurately determined for the Emissions Control Systems as applied to a tank over a complete fermentation cycle. The absence of such information is especially significant for a facility such as CCWS, which provides winemaking services to multiple different vineyards and winemakers, producing wine from different varieties of grapes and in different styles. The emissions from these multiple types of wines have been shown to vary significantly.	reported by CCWS from use of these actual control devices on their specific fermentation tanks. This real-world actual data that we observed and evaluated confirms that the vendor guarantees are properly selected for this process. As noted in Response 2-7, it is not necessary to endeavor on the commenter's 5-step evaluation process. For future generations of emission control systems at wineries, establishing an updated performance standard may be necessary (e.g., new data is available, updates to technologies, etc.). Updates to the standards would be performed at the time of future New Source Review permitting actions, concurrent with the newer information and technology, not now. The permit and BACT determination are not "tank" specific, "grape" specific, or "style" specific. In establishing BACT for this permit, we listened to the concerns of the applicant and fully understood the limits of the emission calculations. A mass balance approach to calculating the emissions and control device performance is used for this permit. The emission calculations are based on established EPA/ARB emission factors, coupled with measurement of actual ethanol collected by each control device. Most importantly, the District addressed the numerous issues raised by the commenter regarding individual tank emission rates as well as different grape characteristics by utilizing an averaging basis for the emission standard and compliance mechanism for enforcing that standard. Specifically, a 30-day rolling average for calculating the capture and control efficiency is used. The intent for using this methodology is to average out any specific variability issues related to the fermentation process. We believe that this is a reasonable approach for implementing a first generation control system. This procedure also

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		comports well to CCWS's existing monitoring, recordkeeping and reporting (MRR) processes.
2-9	CCWS's application reflects the lack of any data to support a BACT determination. Although the manufacturers of the Emission Control Systems have guaranteed that they will meet a 67 percent performance standard over an entire fermentation cycle, the EcoPAS guarantee does not apply to the first quarter of a fermentation cycle. As the application notes in the BACT Analysis Summary Form for the EcoPAS system, the "Performance Standard" is "To Be Determined". The capture efficiency of the NoMoVo system is similarly uncertain. NohBell presents a range of possible capture efficiencies from 45% to over 90%. The application notes that the Performance Standard is uncertain.	The District believes that the commenter's concerns are not relevant to this permit and BACT determination. The BACT standard was established based on the understanding that emissions will be based on a mass balance approach (as has been done since 2013) and that compliance with the standard would be based on a 30-day rolling average calculation. The vendor guarantees correctly note the constraints of their stated efficiency value. A 30-day rolling average addresses these constraints, and is a reasonable approach to enable the BACT process to move forward without being bogged down by excessive analytical roadblocks. We are not using control device inlet/outlet source testing as that approach is not well suited to the batch process nature of a typical fermentation cycle (typically 7-15 days). As noted by the control device vendors, the efficiency of their control systems will vary over the entire fermentation cycle. This is a known limitation and is exactly the reason why the District is using the 30-day rolling average approach. See also our comments in Response 2-8 above.
2-10	In its response to the draft permit, CCWS notes that the District agreed that the performance standard in the draft permit was essentially a placeholder, and that the actual control efficiency would be determined during the Source Compliance Demonstration Period. In effect, the District has decided to require the Emission Control Systems so that their efficacy can be demonstrated by CCWS during its operations under the permit. If the efficiency of the Emissions Control Systems cannot even be reasonably	The comment is incorrect. First, nowhere in CCWS's June 7, 2017 letter do they state that the District agreed that the performance standard was a "placeholder". Second, the District never made such a statement to CCWS. As noted in our responses to the commenter's prior comments above, the District established the performance standard of 67 percent based on vendor guarantees, our review of the technologies, a review of the use of these specific technologies at this facility since 2013 and comments/input from CCWS directly. This

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	estimated before implementation, those systems do not have a "proven track-record" and are not "achieve in practice".	performance standard is well founded and certainly is not a "placeholder". The conclusions the commenter draws from the written documents are incorrect. At the pre-application meeting, the District and CCWS discussed the performance standard. CCWS expressed concerns regarding how compliance will be established as well the implications if the performance standard could not be met. The District noted that the purpose of the SCDP is to work out issues that arise during startup and to debug the systems as needed. The District explained that if issues with achieving the performance standard were encountered, CCWS and its vendors would first have to evaluate the technical reasons for the systems not achieving their designated control levels and then implement necessary fixes. We noted that this is standard operating practice and that most issues are resolved during this debugging period. This applies across the board for all ATC permits (e.g., low NOx burners in a boiler). We further discussed how this situation is special since it is a first generation BACT determination. We noted to CCWS that the District recognizes this situation, and that if after all the debugging is completed, all the technical analyses are completed, all the modifications/changes to the control systems are completed and any permit MRR changes are completed, that it is clear that the performance standard cannot be achieved, the District would then be open to modifying the control efficiency value via a modification to the ATC permit.
2-11	The District's analysis in the draft permit of whether the Emissions Control Systems have been achieved in practice is conclusory. The District relies on an EPA letter, which	The District disagrees with the commenter's observations. The District's analysis is based on years of solid operational information at the facility in question. As noted in numerous responses above, these

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	does not provide any additional information regarding whether the Emissions Control Systems have been achieved in practice, and the use of the Emission Control Systems at the CCWS facility. The Emission Control Systems have not been used consistently over all operating ranges at CCWS, and their effectiveness has not been documented on even a single tank.	emission control systems have been effectively capturing and collecting ethanol emission from the wine fermentation processes at CCWS since 2013. CCWS's daily records document this. The comments regarding "consistent use" and "control system effectiveness" have already been rebutted in our responses above and these comments are simply not relevant to the BACT determination. Lastly, the District believes the EPA's September 30, 2016 letter to the SJVAPCD further substantiates our BACT determination. We appreciate and welcome guidance from our oversight agencies. In generating their letter, the EPA had full access to and reviewed all the CCWS daily records.
2-12	Notably absent from the District's BACT analysis is any discussion of the San Joaquin Valley APCD's February 9, 2015 internal memo providing a thorough analysis of whether the Emission Control Systems are "achieved in practice".	Thank you for sharing this internal SJVAPCD memo and bringing it to our attention. It is important to point out that each agency implements their NSR program in a fashion that best meets their programmatic design and goals. Nonetheless, we have reviewed the memo, and disagree with its conclusions. Our intent is not to criticize the SJVAPCD's work. The following are a few brief points that bear mentioning: • Our view is that this memo is out of date. It does not reflect the feedback and direction that the EPA provided the SJVAPCD in their September 30, 2016 letter. We believe this significant issue makes the memo's analyses and conclusions obsolete. The EPA's September 30, 2016 letter is clear that they have determined the three emission control systems currently in operation in Santa Barbara County are "achieved in practice". These systems include the use of the NoMoVo and EcoPAS system at CCWS as well as the water scrubber technology used at the Terravant Wine Center. The EPA followed up with

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		another letter on October 7, 2016 reiterating their concerns that the SJVAPCD had issued permits to wineries that "...do not represent Best Available Control Technology...". The commenter's reliance on the SJVAPCD memo fails to recognize the points raised by SJVAPCD's oversight agency. • The memo correctly points out that the term "achieved in practice" is subject to interpretation since it is not defined in any regulation. As such, this memo only represents SJVAPCD's point of view (one that is not even shared by their oversight agencies). Other agencies may differ and have their own, reasonable interpretations. • SJVAPCD developed seven criteria for evaluating whether existing winery emission control technologies can be designated achieved in practice in their review process. As noted, it is their prerogative to develop whatever guidance they deem necessary for their program. It would be incorrect, however, for the commenter to assume that other air districts would be in total agreement with SJVAPCD's analysis. • Terravant (2008-Current). The following statement is incorrect: "The control technology is only required to run sufficiently to reduce emissions below the offset threshold – it is not required to be operated all of the time...". Terravant's permits have always required their emission control system to be operational at all times when fermentation is occurring. • Terravant (2008-Current): The memo states "The packed bed scrubber technology does not meet the achieved in practice criteria since the control technology has not been operating in compliance with its permit requirements...". Working with the

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		vendor, Terravant has been able to remedy the issues with the control device's control efficiency. Proper maintenance and operation of the controls were the main issues. Source tests (inlet/outlet) for the past few years have shown the system to be operating in compliance with permit requirements. Since 2014, five source tests show the efficiency of the controls at: 75%, 84%, 86%, 81%, and 84%. • Terravant (2008-Current). The following statement is incorrect: "...SBCAPCD staff indicated that...they would not recommend that any wineries use this control technology...". Staff between SJVAPCD and SBCAPCD discussed winery controls on a number of occasions. It is likely that a general discussion of the issues regarding the control system was misinterpreted into the statement that appears in this memo. Nonetheless, operations in the past 3 years shows positive results and we have no doubts about this emission control system. • Terravant (2008-Current). The memo states "The packed bed scrubber technology does not meet the achieved in practice criteria since ... the control technology is not commercially available." The equipment that comprise this emission control system are "off-the-shelf" as water scrubbers, pumps, tanks, UV lights (etc.) are all purchasable equipment. The company that designed this control system, or any other company familiar with the design of packed bed scrubber control systems, would not have any difficulty designing a similar system. Even BACT emission control equipment for mature source types must be designed, ordered and custom built.

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		• Central Coast Wine Service (2013): The statement "SBCAPCD has yet to approve the disposal of the NoMoVo slurry to the on-site wastewater facility" is not relevant since we approved the disposal of this slurry to an off-site ethanol distiller. • Central Coast Wine Service (2014/15): The memo states "The refusal of the control vendors to demonstrate the actual control efficiency raises significant questions and concerns over the vendors' control efficiency claims...". The vendors' concerns were valid. As discussed above, a fermentation cycle is a batch process with air emissions that fluctuate from beginning to end. At the beginning of the cycle ethanol emissions are lower, therefore the control efficiency will be more difficult to maintain. During the rest of the cycle, when ethanol emissions are higher, the control efficiency is easier to maintain. Emission control devices are typically more efficient with higher inlet loading. The vendors' guarantees are based on the entire fermentation cycle, as they did not want an inlet/outlet source test to be performed at the beginning of a cycle when efficiencies would be expected to be lower. This is a reasonable concern and is why we selected the 30-day rolling average approach in our draft ATC 15044 permit.
2-13	The District's March 1, 2017 email to CCWS implicitly acknowledges that source testing is feasible, because the EPA plans to perform such testing and the District plans to use the EPA's method when it is developed. The District's email also recognizes that the "mass balance calculations" are a stop-gap until inlet/outlet source testing is conducted.	The commenter has drawn incorrect conclusions. The email states that the EPA may "potentially" do a study to "evaluate" source testing methodologies. The EPA is not currently doing a study nor is such a study on their current task list. A "potential" to "evaluate" does not mean that the District "acknowledges" that testing is "feasible". The only thing the District acknowledges is that if the EPA ever developed

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	Once that source testing conducted, the District will use that source testing for "new projects".	a new source test method for wineries that we may use that method for new projects. This would have no effect on the requirements of operations permitted under ATC 15044.
2-14	The "mass-balance" calculations that the District proposed to use to estimate the effectiveness of the Emission Control Systems are subject to considerable variability and should not be the basis for a determination that the Emission Control Systems have been "achieved in practice".	We do not concur. EPA/ARB fermentation emissions factors are used by air agencies for assessing emissions from wineries. We agree that these emission factors are based on the entire batch fermentation process. That is why the vendors' are uneasy about having performance standards based on snapshot inlet/outlet source tests. As noted above, the District has addressed this issue by establishing a performance standard based on a 30-day rolling average. Using the mass-balance calculation methodology is a practical and reasonable approach. It allows companies like CCWS to address BACT for their facilities in a sensible manner and provides them a path forward for their expansion efforts using monitoring, recordkeeping and reporting tools that are already in use. It also provides the vendors a practical performance standard that they can guarantee and provides the District a practical enforcement mechanism to ensure the controls are working. This is the first generation of BACT for this source type. Future generations will evolve as improvements to the control technologies are developed.
2-15	The commenter concludes by re-iterating their arguments that the NoMoVo and EcoPAS emission control systems should not be considered achieved in practice BACT.	The District, for the reasons provided in the responses above, disagrees with the commenter. The emission control devices proposed by CCWS are achieved in practice BACT.