

NOTICE PRELIMINARY DECISION OF PART 4, & PART 5, *OFFSETS*, OF DISTRICT RULE 207,
REVIEW OF NEW OR MODIFIED SOURCES (NSR)

Pursuant to District Rule 207, Section 6.9, the Monterey Bay Air Resources District (MBARD) solicits written comments to the preliminary decision to approve the issuance of Authority to Construct (ATC) MOD-23-00064 to Monterey Wine Company, LLC for the modification of the wastewater treatment plant, which operates under permit to operate (PTO) GNR-0017841. The equipment is located at 1010 Industrial Way in King City. The modification is for the replacement of the current circulation pumps, and addition of aeration blowers, aeration diffusers, transfer pumps & new aeration pumps.

MBARD Rule 207, *Review of New or Modified Sources (NSR)* shall apply to all new stationary sources and all modifications to existing stationary sources which, after construction or modification, emit or have the potential to emit any affected pollutants. Section 2.33.1 defines a modification to be any physical change, change in method of operation of or addition to any existing stationary source that would result in an actual or potential increase from any permit unit or sum of permit units under consideration as a result of the proposed modification. The emission increase analysis as demonstrated in MBARD's Evaluation Report demonstrates that the proposed modification is subject to NSR.

The facility-wide volatile organic compound (VOC) emissions are greater than or equal to the Offset threshold limits listed for Sections 4.2 and 5.3. As demonstrated in the District's Evaluation Report, the wastewater treatment modification project meets the requirements of Part 4 and Part 5 of Rule 207. Hence, MBARD's preliminary decision to approve this project is being proposed because the facility has the capability of complying with all applicable MBARD rules and regulations.

Monterey Wine Company, LLC's application and MBARD's Evaluation Report are available for public inspection at MBARD's office at 24580 Silver Cloud Court, Monterey, CA. A copy of the evaluation report can be found on MBARD's website at www.mbard.org.

The public has an opportunity to review and comment on the proposed project. Under special circumstances, MBARD may hold a public hearing. Written comments must be submitted to the address below and be postmarked by Friday, July 26, 2024.

Monterey Bay
Air Resources District
24580 Silver Cloud Court
Monterey, CA 93940
(831) 647-9411
ajimenez@mbard.org
Attention: Armando Jimenez

**MONTEREY BAY AIR RESOURCES DISTRICT
EVALUATION REPORT APPLICATION MOD-23-00064**

24580 Silver Cloud Court
Monterey, CA 93940
Telephone: (831) 647-9411

Date: June 2024

APPLICATION RECEIVED FROM:

Monterey Wine Company, LLC
1010 Industrial Way
King City, CA 93930

PLANT SITE LOCATION:

Address:
1010 Industrial Way
King City, CA

Coordinates:
669677 m E
4010878 m N

Latitude °N: 36.227900°
Longitude °E: -121.112017°

SIC No: 2084 (Wines, Brandy, and Brandy Spirits)
NAISC: 312130 (Wineries)
SCC No.: 30282599 (Industrial Processes, Food & Agriculture, Wastewater: Points of Generation, Specify Point)

FACILITY CONTACT:

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APPLICATION PROCESSED BY:

Armando Jimenez, Air Quality Engineer

AUTHORIZED FOR RELEASE ON:

June 26, 2024

COMMENTS MUST BE POSTMARKED BY:

July 26, 2024

APPROVED FOR RELEASE BY:

Mary Giraud
Mary Giraud
Supervising Air Quality Engineer

June 26, 2024
Date

TABLE OF CONTENTS

PROPOSAL:5
APPLICABLE RULES:.....5
EQUIPMENT DESCRIPTION:5
EMISSIONS CALCULATIONS:.....6
RULE COMPLIANCE:8
CONCLUSIONS:.....18
RECOMMENDATIONS:18

LIST OF TABLES

Table 1. Pre-project PTE emissions in lbs/qtr.....	6
Table 2. Pre-project PTE emissions in ton/qtr.	6
Table 3. Post-project PTE emissions in lbs/qtr.	7
Table 4. Post-project PTE emissions in ton/qtr.....	7
Table 5. Post-project – Pre-project potential to emit emissions in lbs/qtr.	7
Table 6. Historical wastewater annual throughput.....	7
Table 7. Actual historic emissions (pre-project) in lbs/qtr.....	8
Table 8. Actual historical emissions (pre-project) in ton/qtr.	8
Table 9. New Emission Increases – Federal BACT Analysis.....	9
Table 10. SCAQMD BACT Guideline for Wastewater System.....	9
Table 11. California BACT determination.....	10
Table 12. Emissions thresholds for offsets.	10
Table 13. Net Emissions Increases – Federal Offsetting Analysis.	10
Table 14. Federal offset determination $PTE_{\text{post-project}} - AHE_{\text{pre-project}}$	11
Table 15. California offset determination $PTE_{\text{post-project}} - PTE_{\text{pre-project}}$	12
Table 16. Facility-wide Potential to Emit Emissions.....	13
Table 17. Net Emissions Increases – Federal Offsetting Analysis.	14
Table 18. Offset determination PTE.	14
Table 19. Facility-wide PTE emissions.	15

LIST OF FIGURES

Figure 1. Google Earth Pro image - Monterey Wine Company, LLC.....18

PROPOSAL:

Monterey Wine Company, LLC (facility or applicant) has submitted a permit application for the modification of their wastewater treatment equipment. The facility is adding new upgrades to the treatment plant. The facility is replacing the current circulation pumps and adding aeration blowers, aeration diffusers, transfer pumps and new aeration pumps.

APPLICABLE RULES:

Rule 200: Permits Required
Rule 207: Review of New and Modified Stationary Sources
Rule 218: Title V Operating Permits
Rule 300: District Fees
Rule 400: Visible Emissions
Rule 402: Nuisance
Rule 436: Title V Permit
Rule 1000: Toxic Air Contaminants
Health and Safety Code 42301.6 – School/Public Notification

EQUIPMENT DESCRIPTION:

Proposed changes to the equipment are shown below:

Wastewater Treatment Plant:

Modification Of The Wastewater Treatment Plant With A Process Capacity Of 120,000 Gallons Per Day (GPD) Average Dry Weather Flowrate (AWDF) As Follows:

Removal Of The Following Equipment:

- (4) Berkeley Circulation Pumps.
- Solar Bee Surface Aerator.
- Pilot Static Clarifier Feed Pump.
- Static Clarifier.

Additions Of The following Equipment:

- (4) 75 Horsepower (HP) Turbo Aeration Blowers, Inovair.
- (258) Submerged Aeration Diffusers (198 In Pond 1, 60 In Pond 2), Air Diffusion Systems.
- (2) Process Wastewater Transfer Pumps, Gorman-Rupp 5 HP
- (1) Additional Process Wastewater Aeration Pond

Wastewater Treatment Plant Consisting Of The Following Equipment

1. Solids Screen, P&L Specialties Model PL-RS-6-38, Serial #202159.
2. Five (5) Submersed Receiving Sump Pumps, Two (2) Located At Solids Screen, Two (2) Located At Crusher Area, And One (1) Located West Of Bottling/Warehousing/Barrel Building.
3. Four (4) 75 HP Aeration Blowers, Inovair, Powering A Total Of (258) Submerged Aeration Diffusers, 198 In Pond 1, And 60 In Pond 2, Air Diffusion Systems.

4. Two (2) Process Wastewater Transfer Pumps, Gorman-Rupp, 5 HP.
5. Process Wastewater Aeration Ponds #1 & #2.
6. Return Activated Sludge Recirculation Pump, Gorman-Rupp, With 3-Hp Motor, Routing Solids To Headworks.
7. Discharge Pump, Gorman-Rupp, With 15-Hp Motor, Routing Treated Water To Vineyard.

EMISSIONS CALCULATIONS:

The emissions for the wastewater treatment plant are estimated using the Monterey Bay Air Resources District’s (MBARD) Winery Emission Factor Guidance (2/1/2018)¹. The guidance provides the default emission factor for wastewater ponds as 227.8 pound ethanol (EtOH) per million gallon throughput (lb EtOH/1,000,000 gal).

Existing (pre-project) potential to emit (PTE) emissions

The facility currently has a wastewater throughput limit of 10,000,000 gallons per year. The existing PTE emissions from the wastewater ponds are estimated as follows:

$$Emission\left(\frac{lb}{yr}\right) = \frac{10,000,000\ gal}{year} \times \frac{227.8\ lb\ EtOH}{1,000,000\ gal} = \frac{2,278.0\ lb\ EtOH}{year}$$

$$Emission\left(\frac{lb}{day}\right) = \frac{2,278\ lb\ EtOH}{year} \times \frac{year}{365\ days} = \frac{6.24\ lb\ EtOH}{day}$$

$$Emission\left(\frac{lb}{day}\right) = \frac{2,278\ lb\ EtOH}{year} \times \frac{ton}{2,000\ lb} = \frac{1.14\ ton\ EtOH}{year}$$

Table 1 and Table 2 show the existing pre-project potential emissions broken down by quarter in pounds per quarter (lbs/qtr) and in tons per quarter (ton/qtr) respectively. The emissions are based on the wastewater treatment facility operating every day in each quarter, which are assessed to be 90 days for quarter 1, 91 days for quarter 2, 92 days for quarter 3, and 92 days for quarter 4.

Table 1. Pre-project PTE emissions in lbs/qtr.

Pollutant	Quarter 1 (lbs/qtr)	Quarter 2 (lbs/qtr)	Quarter 3 (lbs/qtr)	Quarter 4 (lbs/qtr)
VOC	561.70	567.94	574.18	574.18

¹ Example: Quarter 1 VOC = (2,278.0 lb/yr) (yr/365 day) (90 day/Q1) = 561.70 lb/qtr 1.

Table 2. Pre-project PTE emissions in ton/qtr.

Pollutant	Quarter 1 (ton/qtr)	Quarter 2 (ton/qtr)	Quarter 3 (ton/qtr)	Quarter 4 (ton/qtr)
VOC	0.28	0.28	0.29	0.29

¹ Example: Quarter 1 VOC = (561.70 lb/qtr 1) (ton/2,000 lb) = 0.28 ton/qtr 1.

Proposed (post-project) new PTE emissions

¹ Monterey Bay Air Resources District, Winery Emission Factor Guidance (2/1/2018). https://mbard.specialdistrict.org/files/9417a4944/Winery-Emission-Factor-Guidance_02012018-1.pdf.

The facility has proposed a new annual wastewater throughput of 12,000,000 gallons per year. The new proposed (post-project) PTE emissions from the wastewater ponds are estimated as follows:

$$Emission\left(\frac{lb}{yr}\right) = \frac{12,000,000\ gal}{year} \times \frac{227.8\ lb\ EtOH}{1,000,000\ gal} = \frac{2,733.6\ lb\ EtOH}{year}$$

$$Emission\left(\frac{lb}{day}\right) = \frac{2,733.6\ lb\ EtOH}{year} \times \frac{year}{365\ days} = \frac{7.49\ lb\ EtOH}{day}$$

$$Emission\left(\frac{lb}{day}\right) = \frac{2,733.6\ lb\ EtOH}{year} \times \frac{ton}{2,000\ lb} = \frac{1.37\ ton\ EtOH}{year}$$

Table 3 and Table 4 shows the new proposed post-project potential emissions broken down by quarter in pounds per quarter (lbs/qtr) and in tons per quarter (ton/qtr) respectively. The emissions are based on the boiler operating every day in each quarter, which is assessed to be 90 days for quarter 1, 91 days for quarter 2, 92 days for quarter 3, and 92 days for quarter 4.

Table 3. Post-project PTE emissions in lbs/qtr.

Pollutant	Quarter 1 (lbs/qtr)	Quarter 2 (lbs/qtr)	Quarter 3 (lbs/qtr)	Quarter 4 (lbs/qtr)
VOC	674.04	681.53	689.02	689.02

¹ Example: Quarter 1 VOC = (2,733.6 lb/yr) (yr/365 day) (90 day/Q1) = 674.04 lb/qtr 1.

Table 4. Post-project PTE emissions in ton/qtr.

Pollutant	Quarter 1 (ton/qtr)	Quarter 2 (ton/qtr)	Quarter 3 (ton/qtr)	Quarter 4 (ton/qtr)
VOC	0.34	0.34	0.34	0.34

¹ Example: Quarter 1 VOC = (674.04 lb/qtr 1) (ton/2,000 lb) = 0.28 ton/qtr 1.

New (post-project) vs existing (pre-project) PTE emissions

Table 5 shows the new post-project potential emissions, as shown in Table 3, minus the pre-project potential emissions, as shown in Table 1, in lbs/qtr. The table shows that there is an increase in potential emissions for VOC.

Table 5. Post-project – Pre-project potential to emit emissions in lbs/qtr.

Pollutant	Quarter 1 (lbs/qtr) ¹	Quarter 2 (lbs/qtr) ¹	Quarter 3 (lbs/qtr) ¹	Quarter 4 (lbs/qtr) ¹
VOC	112.34	113.59	114.84	114.84

¹ The post-project PTE emissions are shown in Table 3 in pounds per quarter. The pre-project PTE emissions are shown in Table 1 in pounds per quarter. Example for Quarter 1: (674.04 lb/qtr 1) – (561.70 lb/qtr 1) = 112.34 lb/qtr 1.

Actual historic emissions (pre-project)

The facility submitted the actual throughput data for the existing equipment for the period of 2020-2022. Table 6 shows the historical annual wastewater throughput for the winery wastewater ponds.

Table 6. Historical wastewater annual throughput.

Year	Wastewater Throughput (gal)
2020	6,758,312
2021	7,599,398
2022	6,477,906
Average	6,945,205

The average wastewater throughput for the past three years (2020, 2021 & 2022) was 6,945,205 gallons per year. The uncontrolled actual historic emissions from the wastewater ponds are estimated as follows:

$$Emission = \frac{6,945,205 \text{ gal}}{\text{year}} \times \frac{227.8 \text{ lb EtOH}}{1,000,000 \text{ gal}} = \frac{1,582.12 \text{ lb EtOH}}{\text{year}}$$

$$Emission\left(\frac{\text{lb}}{\text{day}}\right) = \frac{1,582.12 \text{ lb EtOH}}{\text{year}} \times \frac{\text{year}}{365 \text{ days}} = \frac{4.33 \text{ lb EtOH}}{\text{day}}$$

$$Emission\left(\frac{\text{lb}}{\text{day}}\right) = \frac{1,582.12 \text{ lb EtOH}}{\text{year}} \times \frac{\text{ton}}{2,000 \text{ lb}} = \frac{0.79 \text{ ton EtOH}}{\text{year}}$$

Table 7 and Table 8 shows the actual historic emissions broken down by quarter in pounds per quarter (lbs/qtr) and in tons per quarter (ton/qtr) respectively. The emissions are based on the boiler operating every day in each quarter, which is assessed to be 90 days for quarter 1, 91 days for quarter 2, 92 days for quarter 3, and 92 days for quarter 4.

Table 7. Actual historic emissions (pre-project) in lbs/qtr.

Pollutant	Quarter 1 (lbs/qtr)	Quarter 2 (lbs/qtr)	Quarter 3 (lbs/qtr)	Quarter 4 (lbs/qtr)
VOC	390.11	394.45	398.78	398.78

¹ Example: Quarter 1 VOC = (1,582.12.6 lb/yr) (yr/365 day) (90 day/Q1) = 390.11 lb/qtr 1.

Table 8. Actual historical emissions (pre-project) in ton/qtr.

Pollutant	Quarter 1 (ton/qtr)	Quarter 2 (ton/qtr)	Quarter 3 (ton/qtr)	Quarter 4 (ton/qtr)
VOC	0.20	0.20	0.20	0.20

¹ Example: Quarter 1 VOC = (390.11 lb/qtr 1) (ton/2,000 lb) = 0.20 ton/qtr 1.

RULE COMPLIANCE:

The following MBARD rules apply to the operation as specified:

Rule 200 – Permits Required

The purpose of this Rule is to identify when MBARD permits are issued. The provisions of this Rule shall apply to any person who builds, erects, alters, or replaces any article, machine, equipment or other contrivance which may cause the issuance of air contaminants or the use of which may eliminate or reduce or control the issuance of air contaminants.

Pursuant to Section 3.1, person shall build, erect, alter, or replace any article, machine, equipment or other contrivance which may cause the issuance of air contaminants or the use of which may eliminate or reduce or control the issuance of air contaminants unless the facility owner or operator has obtained a separate written Authority to Construct for each permit unit from the Air Pollution Control Officer. An Authority to Construct shall remain in effect until the Permit to Operate the equipment for which the application was filed is granted or denied or the application is cancelled.

Exceptions to MBARD Rule 200 are identified in MBARD Rule 201.

Rule 207 – Review of New or Modified Sources (as adopted on 4/20/11)

The purpose of this Rule is to provide for the review of new and modified stationary air pollution sources to meet requirements for the review of new and modified stationary sources (NSR) and for the Prevention of Significant Deterioration (PSD), under the provisions of the federal Clean Air Act; and requirements for NSR under the provisions of the California Clean Air Act.

This Rule shall apply to all new stationary sources and all modifications to existing stationary sources which, after construction or modification, emit or have the potential to emit any affected pollutants. The proposed project is subject to the requirements of this Rule.

Federal Best Available Control Technology (BACT) Analysis:

Pursuant to Section 4.1.1, an applicant shall apply BACT to a new stationary source or modification of an existing source, which has the potential to emit greater than or equal to any one of the affected pollutant levels listed in Table 4.1.1 or a modification of an existing stationary source which has the potential to result in a new emissions increase, as defined in Section 2.37, occurring after October 20, 2010 for PM_{2.5} or after August 19, 1983 for PM₁₀ or after July 15, 1976 for any other affected pollutant.

Table 9 shows the controlled emissions from the proposed project, the facility-wide new emissions and the Federal BACT thresholds of Table 4.1.1.

Table 9. New Emission Increases – Federal BACT Analysis

Application no./Equipment Description/Installation Date:	NO _x (lb/day)	VOC (lb/day)	CO (lb/day)	SO _x (lb/day)	PM ¹ (lb/day)	PM ₁₀ ¹ (lb/day)	PM _{2.5} ^{1,2} (lb/day)
MOD-23-00064/GNR-0017841 Wastewater treatment		7.49					
13545 Boiler 4.412 MMBtu/hr (2007)	10.38	0.55	2.08	0.06	0.52	0.52	N/A
14765 Boiler 5.0 MMBtu/hr (7/30/2010)	11.76	0.62	2.35	0.07	0.59	0.59	0.59
GNR-0017560A Distillation column system (2017)		0.85					
GNR-0017839A Wine fermentation & storage (2003)		173.80					
GNR-0017840 Oak barrel storage and aging (2018)		11.67					
Total:	22.14	194.98	4.43	0.13	1.11	1.11	0.59
Table 4.1.1 Federal BACT Threshold:	150	150	550	150	150	82	54.79

¹ PM₁₀ and PM_{2.5} fractions estimated using CARB’s CEIDARS particulate matter size profile database (updated 6/9/23). For IC engine-diesel (profile #116): PM₁₀ = 0.96 PM & PM_{2.5} = 0.937 PM]. For IC engine-gas (profile #123): PM₁₀ = 0.994 PM & PM_{2.5} = 0.992 PM. For gas-fired boilers (profile #1101): PM = PM₁₀ = PM_{2.5}.

² Includes only PM_{2.5} emission occurring after October 20, 2010.

Table 9 shows that the new emissions, as defined in Section 2.37, exceed the BACT thresholds of Section 4.1.1 for VOCs. Table 10 shows the South Coast Air Quality Management District (SCAQMD) BACT guidelines for Wastewater System.

Table 10. SCAQMD BACT Guideline for Wastewater System.

Subcategory	VOC
Oil/Water Separator	Cover and Vent to Vapor Disposal System (1988); and Compliance with Rule 1176 (12-5-2003)
Other Equipment	Compliance with Rule 1176 if Applicable by Rule (12-5-2003)

As shown in Table 10, BACT for “Other Equipment” is compliance with Rule 1176 if applicable by Rule. Per SCAQMD Rule 1176, the Rule applies to wastewater systems and associated control equipment located

at the following facilities:

- Petroleum refineries
- On-shore oil production fields
- Off-shore oil production platforms
- Chemical plants: defined as any facility engaged in producing chemicals, and/or manufacturing products by chemical processes that has 282 as the first three digits in its Standard Industrial Classification (SIC) Code.
- Industrial facilities: defined as facilities engaged the production and distribution of natural gas, pipeline distribution or wholesale distribution of crude petroleum and petroleum products, as classified under SIC group numbers 492, or 461 respectively.

The Monterey Wine Company, LLC does not meet the applicability requirements of SCAQMD Rule 1176.

A search of the California Air Resources Board (CARB) BACT clearing house and EPA’s BACT clearing house did not yield any results for winery wastewater ponds.

California BACT analysis

Pursuant to Section 5.2, BACT shall be required for any new or modified permit unit with a potential to emit 25 pounds per day or more of VOCs or NO_x. Table 11 shows that the proposed project’s uncontrolled emissions do not trigger the CA BACT thresholds.

Table 11. California BACT determination.

Pollutant	BACT threshold (lb/day)	Project uncontrolled emissions (lb/day)	BACT triggered?
NO _x	25	-	No
VOC	25	7.49	No

Federal Offsets analysis

Section 4.2 requires that offsets be provided from a new or modified stationary source with a net emissions increase, as defined in Section 2.36, equal to or exceeding the offset emissions thresholds. Table 12 shows the emissions thresholds for offsets of Section 4.2.

Table 12. Emissions thresholds for offsets.

Compound	NO _x	VOC	CO	SO _x	PM	PM ₁₀ ¹
Threshold limit (lb/day)	150	150	550	150	150	82

Table 13 shows the net emissions increase for the facility including the proposed project under application MOD-23-00064.

Table 13. Net Emissions Increases – Federal Offsetting Analysis.

Application no./Equipment Description/Installation Date:	NO _x (lb/day)	VOC (lb/day)	CO (lb/day)	SO _x (lb/day)	PM ¹ (lb/day)	PM ₁₀ ¹ (lb/day)
MOD-23-00064/GNR-0017841 Wastewater treatment		7.49				
13545 Boiler 4.412 MMBtu/hr (2007)	10.38	0.55	2.08	0.06	0.52	0.52
14765 Boiler 5.0 MMBtu/hr (7/30/2010)	11.76	0.62	2.35	0.07	0.59	0.59

Application no./Equipment Description/Installation Date:	NO _x (lb/day)	VOC (lb/day)	CO (lb/day)	SO _x (lb/day)	PM ¹ (lb/day)	PM ₁₀ ¹ (lb/day)
GNR-0017560A Distillation column system (2017)		0.85				
GNR-0017839A Wine fermentation & storage (2003)		173.80				
GNR-0017840 Oak barrel storage and aging (2018)		11.67				
Total:	22.14	194.98	4.43	0.13	1.11	1.11
Table 4.2.2 Offset Threshold:	150	150	550	150	150	82

¹ PM₁₀ and PM_{2.5} fractions estimated using CARB’s CEIDARS particulate matter size profile database (updated 6/9/23). For gas-fired boilers (profile #1101): PM = PM₁₀ = PM_{2.5}.

Table 13 shows the facility exceeds the offset thresholds for VOCs of Section 4.2 and the project is subject to the offset requirements of Section 4.2.

Per Section 4.2.5, the amount of offsets obtained shall be at least equal to the net emissions increase from the proposed new source or modification. The affected emission units associated with the expansion of the winery wastewater pond. Section 7.4.1 describes how the net emissions increase is to be calculated. Emissions from the modified source shall be based on potential to emit and emissions profiles from an existing source shall be based on the actual operating conditions. In addition, Section 4.2.4 specifies that emissions profiles shall be based on a quarterly basis.

Table 14 shows the comparison of the VOC emissions profile for the proposed project, PTE_{post-project}, and the actual historical emissions of the existing source, AHE_{pre-project}.

Table 14. Federal offset determination PTE_{post-project} – AHE_{pre-project}.

Federal Quarterly Profiles	Quarter 1 (tons/qtr)	Quarter 2 (tons/qtr)	Quarter 3 (tons/qtr)	Quarter 4 (tons/qtr)
PTE Post-Project Emissions ¹ (Table 4):				
Wastewater pond MOD-23-00064	0.34	0.34	0.34	0.34
AHE Pre-Project Emissions ² (Table 8):				
Wastewater pond GNR-0017841	0.20	0.20	0.20	0.20
PTE _{post-project} – AHE _{pre-project} :	0.14	0.14	0.14	0.14

¹ The post-project PTE emissions are shown in Table 4 in tons per quarter.

² The pre-project AHE emissions are shown in Table 8 in tons per quarter.

Table 14 shows that the VOC emission increases from the proposed modification results in an increase of 0.14 tons for quarter 1, 0.14 tons for quarter 2, 0.14 for quarter 3 and 0.14 for quarter 4. The quarterly VOC emission increases must be offset by emission reductions. MBARD’s Policy for Rounding, dated April 18, 2017, for determining the amount of offsets required in accordance with MBARD Rule 207 is to round up to the tenths place and to the nearest whole number. For example, the given number of decimal places is 0 so a quarterly offset amount of 0.14 tons rounds to 0. Thus, for this project, no offsets are required.

California Offsets analysis

Per Section 5.3.1, any modified source with a potential to emit 137 pounds per day or more of VOCs or NO_x shall be required to provide offsets. As shown in Table 13, the facility has the potential to emit more than 137 pounds per of VOCs. Accordingly, the facility is subject to offsets per the California Clean Air

Act (CCAA).

Per Section 5.3.4, the amount of offsets required shall be equal to the difference between the modified source and the existing source. Per Section 5.4, emission profiles for new sources, existing sources and modified sources are based upon potential to emit, as described in Section 7.1. In addition, Section 5.3.2 states that offsets shall be determined on a quarterly basis.

Table 15 shows the comparison of the VOC emissions profile for the proposed project, $PTE_{\text{post-project}}$, and the PTE emissions of the existing source, $PTE_{\text{pre-project}}$.

Table 15. California offset determination $PTE_{\text{post-project}} - PTE_{\text{pre-project}}$.

California Quarterly Profiles	Quarter 1 (tons/qtr)	Quarter 2 (tons/qtr)	Quarter 3 (tons/qtr)	Quarter 4 (tons/qtr)
PTE Post-Project Emissions ¹ (Table 4):				
Wastewater pond MOD-23-00064	0.34	0.34	0.34	0.34
PTE Pre-Project Emissions ² (Table 2):				
Wastewater pond GNR-0017841	0.28	0.28	0.29	0.29
$PTE_{\text{post-project}} - PTE_{\text{pre-project}}$:	0.06	0.06	0.05	0.05

¹ The post-project PTE emissions are shown in Table 4 in tons per quarter.

² The pre-project PTE emissions are shown in Table 2 in tons per quarter.

As shown in Table 15, the VOC emission increases from the proposed modification results in an increase of 0.06 tons for quarter 1, 0.06 tons for quarter 2, 0.05 for quarter 3 and 0.05 for quarter 4. The quarterly VOC emission increases must be offset by emission reductions. MBARD’s Policy for Rounding, dated April 18, 2017, for determining the amount of offsets required in accordance with MBARD Rule 207 is to round up to the tenths place and to the nearest whole number. For example, the given number of decimal places is 0 so a quarterly offset amount of 0.06 tons rounds to 0. Thus, for this project, no offsets are required.

Visibility, soils, and vegetation analysis:

Section 3.2 requires the applicant to provide MBARD with an analysis of impairment to visibility, soils and vegetation. MBARD does not find it necessary to determine the negligible effect emissions from this modification will have on visibility, soils and vegetation.

Ambient air quality standards (AAQS) and emission increments:

Section 3.3, Ambient Air Quality Standards and Emission Increments, prohibits emissions from causing or contributing to a violation of an ambient air quality standard or exceeding any air quality increment. Moreover, Section 6.6, Air Quality Increment Analysis, prohibits a source which is subject to Section 4.2, Offset Requirements, from exceeding 50% of the remaining emissions increment.

The operation has the potential to emit ethanol emissions. Ozone (O₃), a component of smog, is formed in the atmosphere rather than being directly emitted from pollutant sources. O₃ forms as a result of VOCs and NO_x reacting in the presence of sunlight in the atmosphere. VOCs and NO_x are termed “O₃ precursors” and their emissions are regulated in order to control the creation of O₃. O₃ is a regional pollutant and ambient concentration can only be predicted using regional photochemical models that account for all sources of precursors, which is beyond the scope of this analysis. Therefore, no photochemical O₃ modeling was conducted. Furthermore, on February 25, 2021, the California Air Resources Board (CARB) approved the proposed updates to the State Area Designation based on 2017 to 2019 air quality data which designates MBARD as attainment for O₃.

Rule 207 – Review of New or Modified Sources (as adopted on 2/15/17)

Note that MBARD has not received approval for the 2/15/2017 version of Rule 207 and MBARD is implementing Rule 207 as adopted on 4/20/2011. For informational purposes only, the Rule applicability of Rule 207 as adopted on 2/15/2017 is as follows:

The purpose of this Rule is to provide for the review of new and modified stationary air pollution sources to meet the New Source Review requirements under the provisions of the California Clean Air Act. This Rule provides mechanisms by which Authorities to Construct may be granted to such sources without interfering with the attainment or maintenance of California ambient air quality standards. Each project subject to New Source Review shall undergo a review under the federal requirements contained within Rule 220 and Rule 221, and a parallel review under the requirements of this Rule and the most stringent applicable provisions shall apply.

Rule 207 applies to all new stationary sources and all modifications to existing stationary sources, which after construction or modification, emit or have the potential to emit any affected pollutants. This project is subject to the requirements of this Rule.

BACT requirements

Pursuant to Section 4.1.1, BACT shall be required for any new or modified permit unit with a potential to emit 25 pounds per day or more of VOCs or NO_x. As shown in Table 11, California CACT determination, the proposed project does not have the potential to exceed 25 pounds per day of VOCs and is not a source of NO_x.

Pursuant to Section 4.1.2, BACT shall be required for a new or modified stationary source which has the potential to emit greater than or equal to any one of the affected pollutant levels listed in Table 4.1.1.

Table 16 shows the emissions from the new project, the facility-wide emissions and the BACT thresholds of Section 4.1.2, Table 4.1.1.

Table 16. Facility-wide Potential to Emit Emissions.

Application no./Equipment Description/Installation Date:	NO _x (lb/day)	VOC (lb/day)	CO (lb/day)	SO _x (lb/day)	PM ¹ (lb/day)	PM ₁₀ ¹ (lb/day)	PM _{2.5} ^{1,2} (lb/day)
MOD-23-00064/GNR-0017841 Wastewater treatment		7.49					
13545 Boiler 4.412 MMBtu/hr (2007)	10.38	0.55	2.08	0.06	0.52	0.52	0.52
14765 Boiler 5.0 MMBtu/hr (7/30/2010)	11.76	0.62	2.35	0.07	0.59	0.59	0.59
GNR-0017560A Distillation column system (2017)		0.85					
GNR-0017839A Wine fermentation & storage (2003)		173.80					
GNR-0017840 Oak barrel storage and aging (2018)		11.67					
Total:	22.14	194.98	4.43	0.13	1.11	1.11	1.11
Table 4.1.1 Federal BACT Threshold:	150	150	550	150	150	82	54.79

¹ PM₁₀ and PM_{2.5} fractions estimated using CARB's CEIDARS particulate matter size profile database (updated 6/9/23). For

IC engine-diesel (profile #116): PM₁₀ = 0.96 PM & PM_{2.5} = 0.937 PM]. For IC engine-gas (profile #123): PM₁₀ = 0.994 PM & PM_{2.5} = 0.992 PM. For gas-fired boilers (profile #1101): PM = PM₁₀ = PM_{2.5}.

Table 16 shows that the new emissions, as defined in Section 2.37, exceed the BACT thresholds of Section 4.1.1 for VOCs. As demonstrated above in the Federal BACT analysis, there are no applicable BACT requirements for the proposed project.

Offset requirements

Pursuant Section 4.2, Offsets are required for any new or modified source, which has the potential to emit equal to or greater than the thresholds specified in Rule 207, Table 4.2.1. Table 17 shows the facility wide PTE emissions and the offset thresholds specified in Section 4.2, Table 4.2.1.

Table 17. Net Emissions Increases – Federal Offsetting Analysis.

Application no./Equipment Description/Installation Date:	NO _x (lb/day)	VOC (lb/day)	CO (lb/day)	SO _x (lb/day)	PM ¹ (lb/day)	PM ₁₀ ¹ (lb/day)
MOD-23-00064/GNR-0017841 Wastewater treatment		7.49				
13545 Boiler 4.412 MMBtu/hr (2007)	10.38	0.55	2.08	0.06	0.52	0.52
14765 Boiler 5.0 MMBtu/hr (7/30/2010)	11.76	0.62	2.35	0.07	0.59	0.59
GNR-0017560A Distillation column system (2017)		0.85				
GNR-0017839A Wine fermentation & storage (2003)		173.80				
GNR-0017840 Oak barrel storage and aging (2018)		11.67				
Total:	22.14	194.98	4.43	0.13	1.11	1.11
Table 4.2.2 Offset Threshold:	150	150	550	150	150	82

¹ PM₁₀ and PM_{2.5} fractions estimated using CARB’s CEIDARS particulate matter size profile database (updated 6/9/23). For gas-fired boilers (profile #1101): PM = PM₁₀ = PM_{2.5}.

Table 17 shows the facility exceeds the VOC offset threshold of Section 4.2, Table 4.2.1.

Pursuant to Section 4.2.3, offsets obtained shall be equal to the potential to emit increase from the proposed new source or modification. Table 18 shows the comparison of the VOC emissions profile for the proposed project, PTE_{post-project}, and the PTE emissions of the existing source, PTE_{pre-project}.

Table 18. Offset determination PTE.

California Quarterly Profiles	Quarter 1 (tons/qtr)	Quarter 2 (tons/qtr)	Quarter 3 (tons/qtr)	Quarter 4 (tons/qtr)
PTE Post-Project Emissions¹ (Table 4):				
Wastewater pond MOD-23-00064	0.34	0.34	0.34	0.34
PTE Pre-Project Emissions² (Table 2):				
Wastewater pond GNR-0017841	0.28	0.28	0.29	0.29
PTE_{post-project} – PTE_{pre-project}:	0.06	0.06	0.05	0.05

¹ The post-project PTE emissions are shown in Table 4 in tons per quarter.

² The pre-project PTE emissions are shown in Table 2 in tons per quarter.

As shown in Table 18, the VOC emission increases from the proposed modification results in an increase of 0.06 tons for quarter 1, 0.06 tons for quarter 2, 0.05 for quarter 3 and 0.05 for quarter 4. The quarterly VOC emission increases must be offset by emission reductions. MBARD’s Policy for Rounding, dated April 18, 2017, for determining the amount of offsets required in accordance with MBARD Rule 207 is to round up to the tenths place and to the nearest whole number. For example, the given number of decimal places is 0 so a quarterly offset amount of 0.05 tons rounds to 0. Thus, for this project, no offsets are required.

As pointed out, the Rule as amended on 2/15/2017 has not been approved and the version as adopted on 4/20/2011 will be implemented.

Rule 218 – Title V: Federal Operating Permits

This is the implementing regulation by which MBARD issues the federal Operating Permits. Pursuant to the applicability Section 1.2, the provisions of the Rule apply to:

- Any facility that is a major source; or
- Any acid rain source, as defined by Title IV of the Act; or
- Any solid waste incinerator that must comply with Section 129(e) of the Act; or
- Any other stationary source or category of sources deemed to require a Federal Operating Permit (FOP) by the United States EPA.

Section 2.18.1 defines a major source as a stationary source or any group of stationary sources as defined above, that directly emits, or has the potential to emit, 100 tons per year or more of any air pollutant except greenhouse gases. The fugitive emissions of a stationary source shall not be considered in determining whether it is a major stationary source for the purpose of Section 302(j) of the Act unless the source belongs to one of the stationary source categories listed in 40 CFR 70.2 “Definitions – Major Source (2)(i-xxvi).

Table 19 shows that the facility-wide PTE emissions do not exceed the major source thresholds of this Rule.

Table 19. Facility-wide PTE emissions.

Equipment	NO _x (ton/yr)	VOC (ton/yr)	CO (ton/yr)	SO _x (ton/yr)	PM (ton/yr)
MOD-23-00064/GNR-0017841 Wastewater treatment¹		1.37			
13545 Boiler 4.412 MMBtu/hr (2007) ²	1.89	0.1	0.38	0.01	0.09
14765 Boiler 5.0 MMBtu/hr (7/30/2010) ²	2.15	0.11	0.43	0.01	0.11
GNR-0017560A Distillation column system (2017)		0.08			
GNR-0017839A Wine fermentation & storage (2003) ³		8.08			
GNR-0017840 Oak barrel storage and aging (2018) ⁴		2.13			
Total:	4.04	11.87	0.81	0.02	0.2

¹ Wastewater treatment plant emissions: [(12,000,000 gal/yr) (227.8 lb ethanol/1,000,000 gal) (ton/2,000 lb) = 1.37 ton/yr].
² Assumes operating schedule of 24 hr/day & 365 day/yr. For example, NO_x emissions for 5.0 MMBtu/hr boiler: [(11.76 lb NO_x/day) (365 day/yr) (ton/2,000 lb) = 2.15 ton NO_x/yr].
³ Fermentation emissions: [(2,000,000 gal/yr) (6.2 lbVOC/1,000gal) (ton/2,000 lb) + (1,500,000 gal/yr) (2.5 lbVOC/1,000gal) (ton/2,000 lb) = 8.08 ton/yr].
⁴ Oak barrel storage emissions (assumes all barrel are for red wine storage and barrel equals 60 gal): [(2,550 bbl/yr) (60 gal/bbl)

(27.83 lbVOC/1,000gal) (ton/2,000 lb) = 2.13 ton/yr].

Rule 221 – Federal Prevention of Significant Deterioration

The proposed project does not meet the definition of a new major stationary source, or a major modification to an existing stationary source. Since the Prevention of Significant Deterioration (PSD) program only applies to new major stationary sources, or major modifications to stationary sources, this project is not subject to MBARD Rule 221.

Rule 222 – Minor New Source Review

Compliance with the New Source Review (NSR) provisions of the California Clean Air Act, as defined in MBARD Rule 207, ensures compliance with MBARD Rule 222, Federal Minor NSR.

Rule 300 – District Fees

This Rule provides the mechanisms for assessing fees for the issuance and renewal of Permits to Operate, Authorities to Construct, and other actions in MBARD's permit system; and to recover MBARD costs for requested services, materials, or equipment. The fees prescribed within this Rule do not exceed the cost of issuing, maintaining, and performing inspection activities pertaining to all permits.

According to MBARD's Fee Determination Protocol, affirmed by the Board on 6/16/04, and revised on 8/26/19, the billable emissions for wastewater treatment facilities shall be based on the design average dry weather flow (ADWF) for the facility. The facility will have a 120,000 gallons per day design ADWF, which corresponds to a fee code of 1801.

Rule 400 – Visible Emissions

It is prohibited to discharge into the atmosphere from any emission source whatsoever any air contaminant for a period of periods aggregating more than three minutes in any one hour as dark or darker in shade as that designated as No.1 on the Ringelmann Chart or of such opacity as to obscure an observer's view to a degree equal to or greater than 20% opacity. Permit conditions will reiterate nuisance provisions.

Rule 402 – Nuisance

It is prohibited to discharge from any source whatsoever such quantities of air contaminants or other materials 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. Permit conditions will reiterate nuisance provisions.

Rule 436 – Title V Prohibitory Rule

The purpose of this Rule is to provide federally enforceable potential to emit limitations limiting emissions below the thresholds requiring federal Title V operating permits under Rule 218.

General Applicability: This Rule shall apply to any stationary source which would, if it did not comply with the limitations set forth in this rule, have the potential to emit air contaminants equal to or in excess of the threshold for a major source of regulated air pollutants or a major source of hazardous air pollutants (HAPs) and which meets one of the following conditions:

- Rule 436, Section 1.2.1: In every 12-month period, the actual emissions of the stationary source are less than or equal to the emission limitations specified in Section 3.1 (shown below); or
 - 50 percent of the major source thresholds for regulated air pollutants (excluding HAPs), or
 - 5 tons per year of a single HAP, or

- 12.5 tons per year of any combination of HAPs, or
- 50 percent of any lesser threshold for a single HAP as the U.S. EPA may establish by rule.
- Rule 436, Section 1.2.2: In every 12-month period, at least 90 percent of the emissions from the stationary source are associated with an operation limited by any one of the alternative operational limits specified in Section 6.1.

As shown in Table 19 the annual potential emissions are below the applicability thresholds of Section 1.2.1.

Rule 436 Section 1.3.2.1 allows an exemption from Title V Recordkeeping Requirements of Part 4 if actual emissions, based on annual renewal information sheets, will not exceed in every 12 month period the following quantities:

- 5 tons per year for regulated (criteria) pollutants,
- 2 tons per year of any sing HAP,
- 5 tons per year of any combination of HAPs per year, and
- 20% of any lesser threshold for a single HAP that the EPA may establish by rule.

As shown in Table 19 the facility can exceed the thresholds of Section 1.3.2.1. Thus, it will be conditioned to recordkeeping requirements in accordance with this Rule.

As shown in Table 19, the facility is entitled to the exemption from Reporting Requirements of Rule 436 Part 5, pursuant to Section 5.2. Section 5.2 allows an exemption from Title V reporting requirements, if actual emissions, based on annual renewal information sheets, will not exceed in every 12 month period the following quantities:

- 25 tons per year for regulated (criteria) pollutants for which MBARD has federal area designation of attainment, unclassified, transitional or moderate nonattainment.
- 15 tons per year for regulated (criteria) pollutants for which MBARD has federal area designation of serious nonattainment.
- 6.25 tons per year for regulated (criteria) pollutants for which MBARD has federal area designation of severe nonattainment.
- 2.5 tons single Hazardous Air Pollutant (HAP) per year
- 6.25 tons per year of any combination of HAPs per year, or
- 25% of any lesser threshold for a single HAP as the EPA may establish.

Rule 1000 – Toxic Air Contaminants

Rule 1000 applies to any new or modified stationary sources for which an Authority to Construct or a Permit to Operate is required pursuant to MBARD Regulation 200 and which has the potential to emit into the atmosphere any toxic air contaminant (TAC).

Ethanol emissions are expected from this equipment. Ethanol is not listed in the California Air Resources Board list of TACs for the AB2588 program or EPA's list of hazardous air pollutants (HAPs).

Health & Safety Code (H&SC) Section 42301.6 – Public Notification Requirements:

The facility is not located within 1,000 feet of any school as shown in Figure 1. The school/public notification requirements do not apply to the proposed project.

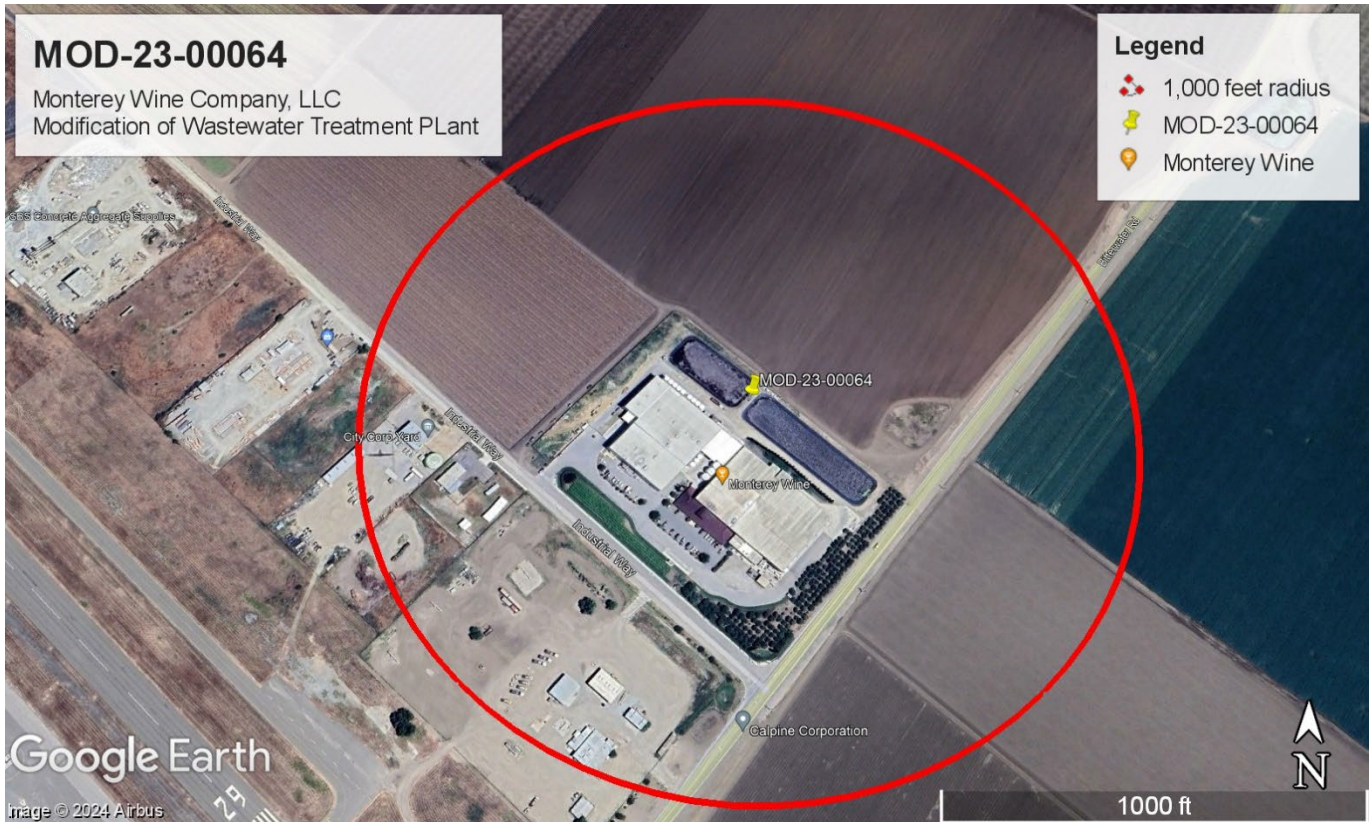


Figure 1. Google Earth Pro image - Monterey Wine Company, LLC.

CONCLUSIONS:

The equipment has the capability to comply with all applicable MBARD rules and regulations.

RECOMMENDATIONS:

Issue the Authority to Construct with the following conditions:

1. **Start-up.** No later than twenty-four (24) hours prior to start-up of the equipment, Monterey Wine Company, LLC shall notify the Monterey Bay Air Resources District (MBARD) and arrange for an inspection of the equipment during normal operations to verify compliance with MBARD rules and regulations. [Basis: MBARD Rule 207]
2. **Reporting.** The annual volume of winery wastewater processed and the average ethanol concentration in the wastewater shall be reported to MBARD, upon request. [Basis: MBARD Rule 207]
3. **Operational Restrictions.** Annual process throughput of winery wastewater shall not exceed 12,000,000 gallons per year. [Basis: MBARD Rule 207]
4. **Monitoring.** The average ethanol concentration shall be determined by the average of two water samples, collected from the initial storage pond at two separate times during the period of September through November of each year. Records of the test sample results shall be retained on-site for a minimum of five years, and made available to MBARD staff upon request. [Basis: MBARD Rule 207]

5. **Recordkeeping.** Pursuant to the requirements of MBARD Rule 436, Part 4, the legal owner or operator shall maintain monthly wastewater throughput records sufficient to determine actual emissions from this operation. This information shall be summarized in a monthly log, shall be retained on-site for a minimum of five years, and made available to MBARD staff upon request. [Basis: MBARD Rule 436]
6. **Nuisance.** No emissions shall constitute a public nuisance. [Basis: MBARD Rule 402]

Note: This permit replaces permit to operate GNR-0017841 issued to Monterey Wine Company, LLC on October 15, 2018. The annual renewal date of this permit remains July 15.