Attachment A

MONITORING AND REPORTING PROGRAM NO. R3-2016-0032

for

DISCHARGES ENROLLED UNDER
GENERAL WASTE DISCHARGE REQUIREMENTS
FOR DISCHARGES OF WINERY WASTE FROM
WINERY OPERATIONS AND CERTIFIED SUSTAINABLE VINYARDS
CENTRAL COAST REGION

Dischargers regulated under *General Waste Discharge Requirements, Order No. R3-2016-0032 for Discharges of Winery Waste and Discharges from Certified Sustainable Vineyards, Central Coast Region* shall be subject to the following monitoring and reporting requirements, unless such requirements are modified or waived by the Executive Officer. Additional requirements may be added by the Executive Officer as needed to adequately ensure compliance with the General WDRs.

Dischargers with discharges of winery processing wastewater or discharges associated with certified sustainable irrigated vineyards must comply with the following sections and provisions of monitoring and reporting program No. R3-2016-0032.

Monitoring Section	Wine Processing (Wineries)	Certified Sustainable Irrigated Vineyards
1. Water Supply	**X**	
2. Production	**X**	
3. Chemical Usage	**X**	**X**
4. Effluent	**X**	
5. Septic System	**X**	
6. Disposal Area	**X**	
7. Disposal Area Soils	**X**	
8. Groundwater	**X**	**X**
9. Solid Waste	**X**	
Provisions		
10. Sampling and Analysis	**X**	**X**
11. Reporting	**X**	**X**

1. WATER SUPPLY MONITORING

A. All wine processing facilities:

Representative samples of the winery water supply shall be collected and analyzed as follows:

Table 1 - Water Supply Monitoring

Constituent	RL[1]	Units	Sample Type	Minimum Frequency of Sampling and Analysis
Total Dissolved Solids	10	mg/L	Grab	Annually
Chloride	0.25	mg/L	Grab	" "
Sodium	0.1	mg/L	Grab	" "
Boron	10	µg/L	Grab	" "
Nitrate + Nitrite (NO3 + NO2 as N) or Nitrate (NO3 as N)	0.1	mg/L	Grab	" "
Sulfate (SO4)	1.0	mg/L	Grab	" "
pH	0.1	--	Grab	" "

1 - Reporting Limit

In addition to the general chemical parameters listed in Table 1, supporting well information shall include:

- Well completion report
- Well depth
- Well screen interval depths
- Well water level as measured from ground surface

2. PRODUCTION MONITORING

A. All wine processing facilities:

Winery production shall be reported as follows:

Table 2 - Production Monitoring

Constituent	Units	Sample Type	Reporting Frequency
Start of Crush	Dates	--	Annually
End of Crush	Dates	--	" "
Duration of Crush	Days	Measured	" "
Grapes Crushed	Tons/year	Measured	" "
Wine Production	Cases/year	Measured	" "

3. CHEMICAL USAGE MONITORING

A. Wine processing, under 100 gallons per day (gpd) – No chemical monitoring required.

B. All other wine processing facilities and certified sustainable vineyards:

A summary of volumes and types of any chemicals used at the winery or vineyard shall be included with each monitoring report.

Chemical Name	Use	Volume Used	Volume Units	Year
Example: Citric Acid	Disinfection	100	lbs/year	2016

4. EFFLUENT MONITORING

All wine processing – Representative samples of effluent from the treatment system, immediately prior to disposal, before the treated wastewater is blended with any other water source, shall be collected and analyzed according to the following schedule:

Table 3a - Effluent Monitoring

Constituent	RL	Units	Sample Type	Minimum Frequency of Sampling and Analysis	
				Tier 0	**Tier 1**
				Irrigated vineyard, certified sustainable vineyard	Wine processing, flow under 100 gpd
Flow	0.25	gallons per day (gpd)	Estimated	None	Three times during crush
Peak Daily Flow	0.25	gpd	Calculated	None	Calculated
Avg. Daily Flow During Crush	0.25	gpd	Calculated	None	Calculated
Avg. Daily Flow During non-Crush	0.25	gpd	Calculated	None	Calculated
pH	0.1	pH units	Grab	None	None
Biochemical Oxygen Demand (BOD_5) or Chemical Oxygen Demand (COD)	2.0	mg/L	Grab	None	None
Total Dissolved Solids	10	mg/L	Grab	None	None
Chloride	0.1	mg/L	Grab	None	None
Sodium	0.1	mg/L	Grab	None	None
Nitrate + Nitrite (as N)[2] or Nitrate (NO3 as N)	0.1	mg/L	Grab	None	None
Total Nitrogen (as N)	--	mg/L	Grab	None	None
Boron	1.0	µg/L	Grab	None	None
Sulfate	1.0	mg/L	Grab	None	None
Dissolved Oxygen	0.1	mg/L	Grab	None	None
Total Chlorine Residual	0.2	mg/L	Grab	None	None
1,2 Dichloroethane	0.50	µg/L	Grab	None	None
1,1 Dichloroethylene	0.50	µg/L	Grab	None	None
1,1,2 Trichloroethane	*0.50*	*mg/L*	*Grab*	*None*	*None*

2 - The MRP allows analysis of "nitrate plus nitrite" to represent nitrate concentrations. The "nitrate plus nitrite" analysis allows for extended laboratory holding times and relieves the Discharger of meeting the short holding time required for nitrate. Dischargers may also analyze for nitrate (NO3 as N).

Table 3b - Effluent Monitoring

				Minimum Frequency of Sampling and Analysis		
				Tier 2	**Tier 3**	**Tier 4**
Constituent	**RL**	**Units**	**Sample Type**	Wine processing between **100** and **3,000** gpd wastewater at all times	Wine processing with flow between **3,000** and **50,000** gpd wastewater at any time	Wine processing generating greater than **50,000** gpd wastewater at any time
Flow	0.25	gallons per day (gpd)	Metered	Weekly	Daily during crush, and weekly for the remainder of year	Daily
Peak Daily Flow	0.25	gpd	Calculated	Annually	Annually	Annually
Avg. Daily Flow During Crush	0.25	gpd	Calculated	Annually	Annually	Annually
Avg. Daily Flow During non-Crush	0.25	gpd	Calculated	Annually	Annually	Annually
pH	0.1	pH units	Grab	At least twice during crush	Weekly during crush, and monthly for the remainder of year	Daily during crush, and weekly for the remainder of year
Biochemical Oxygen Demand (BOD_5) or Chemical Oxygen Demand (COD)	2.0	mg/L	Grab	Annually, during crush	Semiannually, at least once during crush	Quarterly, at least twice during crush
Total Dissolved Solids	10	mg/L	Grab	" "	" "	" "
Chloride	0.1	mg/L	Grab	" "	" "	" "
Sodium	0.1	mg/L	Grab	" "	" "	" "
Nitrate + Nitrite (as N)[2] or Nitrate (NO3 as N)	0.1	mg/L	Grab	" "	" "	" "
Total Nitrogen (as N)	--	mg/L	Grab	" "	" "	" "
Boron	1.0	µg/L	Grab			
Sulfate	1.0	mg/L	Grab	" "	" "	" "
Dissolved Oxygen	0.1	mg/L	Grab	" "	" "	" "
Total Chlorine Residual	0.2	mg/L	Grab	Annually (after equipment cleaning)	Annually (after equipment cleaning)	Annually (after equipment cleaning)
1,2 Dichloroethane	0.50	µg/L	Grab	" "	" "	" "
1,1 Dichloroethylene	0.50	µg/L	Grab	" "	" "	" "

Constituent	RL	Units	Sample Type	Minimum Frequency of Sampling and Analysis		
				Tier 2	**Tier 3**	**Tier 4**
				Wine processing between **100** and **3,000** gpd wastewater at all times	Wine processing with flow between **3,000** and **50,000** gpd wastewater at any time	Wine processing generating greater than **50,000** gpd wastewater at any time
1,1,2 Trichloroethane	0.50	mg/L	Grab	" "	" "	" "

2 - The MRP allows analysis of "nitrate plus nitrite" to represent nitrate concentrations. The "nitrate plus nitrite" analysis allows for extended laboratory holding times and relieves the Discharger of meeting the short holding time required for nitrate. Dischargers may also analyze for nitrate (NO3 as N).

5. SEPTIC SYSTEM MONITORING (PRE-EXISTING SYSTEMS ONLY)

A. Wine processing, under 100 gpd – No septic system monitoring required.

B. All other wine processing:

Solids accumulation in all septic tanks shall be measured semiannually, before and after crush, and the tanks shall be cleaned when it appears (a) the bottom of the scum (floating) layer will be within 4 inches of the bottom of the outlet device before the next scheduled inspection or (b) the sludge level will be within 10 inches of the outlet device before the next scheduled inspection. The leachfield areas shall be inspected each month to evaluate adequate system operation and compliance with this Order. Leachfields should be alternated no less than semiannually to prevent clogging and surfacing effluent. Notations shall be made in a bound log book and include observations of sludge and scum levels and dates on which leachfields are alternated. A summary of the entries made in the log shall be submitted with each monitoring report.

6. DISPOSAL AREA MONITORING

All wine processing - The Discharger shall inspect and document the condition of winery wastewater disposal areas at least once per week during the crush season. Notations shall be made in a bound log book and include observations of available freeboard in ponds, algal growth in ponds, excessive ponding and soil clogging in spreading basins, odors, insects, or other potential nuisance conditions that may be present. Any problems shall be promptly corrected. A record shall be kept of the dates and nature of observations and corrective actions taken. A summary of the entries made in the log shall be submitted with each monitoring report.

7. DISPOSAL AREA SOILS MONITORING

A. Wine processing, under 100 gpd – No disposal area soils monitoring required.

B. All other wine processing:

The Discharger shall implement disposal area soils monitoring **if deemed necessary** by the Executive Officer. In general, large wineries that discharge concentrated wastewater that is not adequately neutralized (to between pH 6.5 and 8.4) to soils with poor buffering capacity must perform soils monitoring according to the following instructions. The Discharger shall establish a soil profile monitoring location that is representative of the disposal area. This sampling location shall be provided on a map submitted to the Central Coast Water Board for concurrence by the Executive Officer. Samples shall be collected and analyzed for the following constituents:

Table 4 - Disposal Area Soils Monitoring

Constituent	Unit	Method	Sample Depths[1]	Frequency
Soil pH	pH units	1:2 DI Water (soil to solution ratio)	6 inches and 2 ft.	Annually (November)
Total Acidity	meq H^+ / 100 g soil	Measured by $BaCl_2$ – TEA (pH 8.3)[2]	6 inches and 2 ft.	Annually (November)

1. Below base of disposal area.
2. See Methods of Soil Analysis (cosponsored by ASTM), American Society of Agronomy, Inc., Madison, WI.

Lime Application – If soil pH is less than or equal to 6.0, the Discharger shall add lime to neutralize the disposal area soils. The amount of lime required for full neutralization is directly related to total acidity. For any representative sample of disposal area soils, multiply the total acidity value (meq of H^+/ 100 g soil) by 2000 to get the maximum lime application rate in lbs. pure lime per acre. The amount of lime applied should not exceed the calculated value.

NOTE: gypsum ($CaSO_4$*$2H_2O$) applied to increase hydraulic conductivity does not neutralize acidity (gypsum is a neutral salt).

8. GROUNDWATER MONITORING OF PRIVATE DOMESTIC DRINKING WATER AND IRRIGATION WELLS

A. All wine processing facilities and certified sustainable vineyards:

The Discharger must sample the primary irrigation well and all wells that are used or may be used for domestic use purposes. A well that is used for domestic use purposes is defined as any groundwater well that is connected to a residence, workshop, or place of business that may be used for human consumption, cooking, or sanitary purposes. Groundwater monitoring parameters must include general chemical parameters and general cations and anions listed in Table 5.

Table 5 - Groundwater Sampling Parameters

Constituent	RL	Units	Sample Type	Minimum Frequency of Sampling and Analysis	Analytical Method[3]
Depth to groundwater	---	Feet below ground	Measured	1. Year one of enrollment, semi-annually (once	

		surface		between March and June and once between September and December) 2. Repeat once every five years - semi-annually during that year (once between March and June and once between September and December)	
pH	0.1	pH Units	Grab	" "	Field or Laboratory Measurement EPA General Methods
Specific Conductance	2.5	µS/cm (micro siemens per centimeter)	Grab	" "	
Total Dissolved Solids	10	mg/L	Grab	" "	
Total Alkalinity as CaCO	10	mg/L	Grab	" "	EPA Method 310.1 or 310.2
Boron	10	µg/L	Grab	" "	EPA 200.8
Manganese	0.2	µg/L	Grab	" "	EPA 200.8
Calcium	0.05	mg/L	Grab	" "	General Cations[5] EPA 200.7, 200.8, 200.9
Magnesium	0.02	mg/L	Grab	" "	
Sodium	0.1	mg/L	Grab	" "	
Potassium	1.0	mg/L	Grab	" "	
Sulfate (SO4)	1.0	mg/L	Grab	" "	General Anions EPA Method 300 or EPA Method 353.2
Chloride	0.25	mg/L	Grab	" "	
Nitrate + Nitrite (NO3 + NO2 as N) or Nitrate (NO3 as N)	0.1	mg/L	Grab	" "	

3 - Dischargers may use alternative analytical methods approved by EPA
5 - General chemistry parameters (major cations and anions) represent geochemistry of water bearing zone and assist in evaluating quality assurance/quality control of groundwater monitoring and laboratory analysis

In addition to the general chemical parameters and general cations and anions listed in Table 5, supporting well information shall include:

- Well completion report
- Well depth
- Well screen interval depths

- Well water level as measured from ground surface

9. SOLID WASTE DISPOSAL MONITORING

A. Wine processing, under 100 gpd – No solid waste disposal monitoring required.

B. All other wine processing facilities:

A summary of estimated volumes and disposal locations of screenings, tank residues, and solids shall be included with each monitoring report.

10. SAMPLING AND ANALYSIS PROVISIONS

All wine processing facilities and certified sustainable vineyards:

1. All sampling, sample preservation, and analysis shall be performed in accordance with the latest edition of 40 CFR Part 136 "Guidelines Establishing Test Procedures for the Analysis of Pollutants". The Executive Officer may specify test methods that are more sensitive than those specified in 40 CFR Part 136.

2. Periodic samples shall be taken at regular intervals and be representative of the monitored activity. For example, where quarterly samples are required, samples shall be collected on a representative day of March, June, September, and December of each year.

3. All analytical services shall be conducted at a laboratory certified for such analyses by the State Department of Health, or at a laboratory approved by the Executive Officer.

4. All analytical data shall be reported with method detection limits (MDLs) and with identification of either practical quantitation levels (PQLs) or limits of quantitation (LOQs).

5. All monitoring instruments and devices used by the Discharger to fulfill this Monitoring and Reporting Program shall be properly maintained and calibrated, as necessary to ensure their continued accuracy.

11. REPORTING PROVISIONS

A. Wine processing, under 100 gpd – No reporting required. All data collected shall be maintained on the site.

B. All other wine processing facilities and certified sustainable vineyards

I. Annual Reporting - An annual report shall be submitted by **January 30th** each year and shall include:

a. Tabular and graphical summaries of the monitoring data obtained during the preceding year.

b. Monitoring data shall be arranged in tabular format so that the date, constituents, and concentrations are readily discernible. The data shall be summarized in such a manner to clearly illustrate whether the discharge complies with effluent limitations.

c. In the future the Executive Officer may require that all effluent and surface water data shall be submitted electronically to the California Integrated Water Quality System (CIWQS).

   For effluent and surface water sampling results, Dischargers will coordinate with a qualified laboratory to submit the following effluent and surface water monitoring results and information, using the Water Board's CIWQS electronic deliverable format (EDF) within 60 days of sample collection:

   a. CIWQS Identification Number
   b. Field point name (Site Name)
   c. Latitude
   d. Longitude
   e. Sample collection date
   f. Analytical results

d. Identification of the location of any agricultural discharges observed discharging directly to surface receiving water.

e. Use of CIWQS tools to self-report violations (i.e. incidents of non-compliance) and associated corrective actions taken to ensure compliance is restored.

f. List of facility staff and corresponding certification levels.

g. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.

h. Discharger shall include electronic pdfs of all lab data sheets and chain of custodies for analytical data as attachments to the reports. Additionally, any calculations used to provide calculated values (e.g., removal efficiencies, coliform medians, average monthly values, average weekly values, intake credits, etc.) shall be attached such that the data and/or assumptions used can be validated.

i. In the report, the Discharger shall clearly identify violations of the WDRs and discuss corrective actions taken or planned and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

II. For groundwater sampling results, Dischargers must coordinate with a qualified laboratory to submit the following groundwater monitoring results and information, electronically, using the Water Board's GeoTracker electronic deliverable format (EDF) within 60 days of sample collection:

a. GeoTracker Ranch Global Identification Number
b. Field point name (Well Name)
c. Field Point Class (Well Type)
d. Latitude
e. Longitude
f. Sample collection date
g. Analytical results
h. Well construction information (e.g., total depth, screened intervals, depth to water), as available

III. Monitoring reports may be required more frequently as deemed necessary by the Executive Officer, based on review of the NOI and site/facility specific information.

IV. If the Discharger monitors any pollutant more frequently than is required by this monitoring program, the results of such monitoring shall be included in the monitoring reports (i.e., quarterly groundwater elevation, etc.).

V. The Discharger shall also submit information cited in making the sustainable certification determination and results of the certified sustainable evaluation. If the vineyard is certified sustainable, provide a copy of the signed letter from certified sustainable program documenting the acreage certified and a copy of the certified sustainable certificate.

VI. All monitoring reports shall be signed and certified in accordance with Section I. 10 and 11 of the General WDRs.

VII. Electronic Reporting - Reports (technical and monitoring reports), shall be submitted electronically to the Central Coast Water Board at (please convert all documents to a searchable PDF format and email):

centralcoast@waterboards.ca.gov

VIII. The Discharger shall report results for all monitoring specified in this MRP. The Discharger shall submit results of all required monitoring using U.S. EPA-approved test methods or other test methods specified in this Order. Reports are to include all new monitoring results obtained since the last report was submitted. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the report.

IX. The Discharger shall ensure that records of all monitoring information are maintained and accessible for a period of at least five years from the date of the sample. This

period of retention shall be extended during the course of any unresolved litigation regarding this discharge or by the request of the Executive Officer. Records of monitoring information shall include:

a. The date, exact place, and time of sampling or measurements;
b. The individual(s) who performed the sampling, and/or measurements;
c. The date(s) analyses were performed;
d. The individual(s) who performed the analyses;
e. The analytical techniques or methods used;
f. All sampling and analytical results;
g. All monitoring equipment calibration and maintenance records.

X. The Discharger shall immediately report any non-compliance potentially endangering public health or the environment to the Water Board (805/549-3147) and/or any additional appropriate agency. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written report shall also be submitted to the Executive Officer within five (5) days of the time the Discharger becomes aware of the circumstances. The written report shall contain (1) a description of the non-compliance and its cause; (2) the period of non-compliance, including dates and times, and if the non-compliance has not been corrected, the anticipated time it is expected to continue; and (3) steps taken or planned to reduce, eliminate, and prevent reoccurrence of the non-compliance.

XI. The Discharger shall report all instances of non-compliance not reported under Reporting Provision No. 9 (above) at the time monitoring reports are submitted. The reports shall contain the information listed in Reporting Provision No. 9.

Ordered By _____

John M. Robertson
Executive Officer

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Date