

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2015-\_\_\_\_  
FOR  
E. & J. GALLO WINERY  
FRESNO WINERY  
FRESNO COUNTY

This Monitoring and Reporting Program (MRP) is required pursuant to California Water Code (CWC) section 13267.

The Discharger shall not implement any changes to this MRP unless and until the Central Valley Water Board adopts, or the Executive Officer issues, a revised MRP. Changes to sample location shall be established with concurrence of Central Valley Water Board staff, and a description of the revised stations shall be submitted for approval by the Executive Officer.

All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. All analyses shall be performed in accordance with **Standard Provisions and Reporting Requirements for Waste Discharge Requirements**, dated 1 March 1991 (Standard Provisions).

Field test instruments (such as pH) may be used provided that the operator is trained in the proper use of the instrument and each instrument is serviced and/or calibrated at the recommended frequency by the manufacturer or in accordance with manufacturer instructions.

Analytical procedures shall comply with the methods and holding times specified in the following: *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater* (EPA); *Test Methods for Evaluating Solid Waste* (EPA); *Methods for Chemical Analysis of Water and Wastes* (EPA); *Methods for Determination of Inorganic Substances in Environmental Samples* (EPA); *Standard Methods for the Examination of Water and Wastewater* (APHA/AWWA/WEF); and *Soil, Plant and Water Reference Methods for the Western Region* (WREP 125). Approved editions shall be those that are approved for use by the United States Environmental Protection Agency or the California Department of Public Health's Environmental Laboratory Accreditation Program. The Discharger may propose alternative methods for approval by the Executive Officer.

If monitoring consistently shows no significant variation in magnitude of a constituent concentration or parameter after at least 12 months of monitoring, the Discharger may request this MRP be revised to reduce monitoring frequency. The proposal must include adequate technical justification for reduction in monitoring frequency.

A glossary of terms used within this MRP is included on page 15.

The Discharger shall monitor the following locations to demonstrate compliance with the requirements of this Order:

Monitoring Location Name	Monitoring Location Description
<b>INF-01</b>	Location where a representative sample of the <b>influent</b> to the anaerobic treatment system can be obtained.
<b>EFF-01</b>	Location where a representative sample of the <b>effluent</b> from the Winery's anaerobic treatment system wastewater can be obtained prior to discharge to the land application areas or the Fresno WWTF.
<b>EFF-02</b>	Location where a representative sample of the <b>effluent</b> of the Winery's crusher/press wastewater can be obtained prior to discharge to the land application areas.
<b>EFF-03</b>	Location where a representative sample of the <b>effluent</b> from the Winery's stillage wastewater can be obtained prior to discharge to the anaerobic treatment system, the Fresno WWTF, or the land application areas.
<b>EFF-04</b>	Location where a representative sample of the ion exchange regenerate can be obtained prior to application to the compost windrows for moisture control.
<b>MW-1 through MW-5, MW-5a, MW-5b, MW-6, MW-8, MW-18-1, and MW-18-2</b>	Groundwater Monitoring Wells MW-1 through MW-8, MW-5a, MW-5b, MW-18-1, and MW-18-2 and any other wells added to the groundwater monitoring network.
<b>PW-5 through PW-8</b>	Supply wells PW-5 through PW-8 and any other supply wells added to the supply well network.
<b>FID-1, IW-1, IW-4, and IW-8</b>	Location where a representative sample of FID irrigation water can be obtained (FID-1). If Gallo uses its own irrigation wells as a supplemental source of irrigation water then it shall, collect a representative sample annually from the irrigation wells (IW-1, IW-4, and IW-8). If one or more irrigation well is used during an irrigation event, the results shall also be presented as a flow weighted average of the wells used.

<b>CMP-01</b>	Location where a representative sample of the storm water/leachate from the composting facility can be obtained prior to distribution into the land application area irrigation system or its use for dust control on the internal Winery roadways.
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### INFLUENT MONITORING

#### Anaerobic Treatment System Influent

Samples of the wastewater to be treated by the anaerobic treatment system shall be collected at INF-001 prior to discharge to the anaerobic treatment system. The samples shall be representative of the volume and nature of the discharges. Time of collection of the samples shall be recorded. Wastewater monitoring prior to treatment by the anaerobic treatment system shall include at least the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Continuous	Flow	mgd	Meter
Weekly	pH	pH Units	Grab
Monthly	Biochemical Oxygen Demand	mg/L	24-hour composite
Monthly	Electrical Conductivity	mg/L	24-hour composite
Monthly	Total Dissolved Solids	mg/L	24-hour composite
Monthly	Fixed Dissolved Solids	mg/L	24-hour composite
Monthly	Nitrite as Nitrogen	mg/L	24-hour composite
Monthly	Nitrate as Nitrogen	mg/L	24-hour composite
Monthly	Ammonia Nitrogen	mg/L	24-hour composite
Monthly	Total Nitrogen	mg/L	24-hour composite
Monthly	General Minerals	mg/L <sup>1</sup>	24-hour composite

1. mg/L or ug/L, as appropriate

### EFFLUENT MONITORING

#### Anaerobic Treatment System Treated Wastewater

The Discharger shall monitor its anaerobic treatment system wastewater at EFF-001. The samples shall be representative of the volume and nature of the discharges. Time of collection of the samples shall be recorded. Anaerobic treatment system wastewater monitoring shall include at least the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Continuous	Flow	mgd	Meter
Weekly	pH	pH Units	Grab
Twice Monthly	Electrical Conductivity	umhos/cm	24-hour composite
Twice Monthly	Total Dissolved Solids	mg/L	24-hour composite
Twice Monthly	Fixed Dissolved Solids	mg/L	24-hour composite
Twice Monthly	Biochemical Oxygen Demand	mg/L	24-hour composite
Twice Monthly	Nitrite as Nitrogen	mg/L	24-hour composite

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Twice Monthly	Nitrate as Nitrogen	mg/L	24-hour composite
Monthly	Ammonia Nitrogen	mg/L	24-hour composite
Twice Monthly	Total Nitrogen	mg/L	24-hour composite
Quarterly	General Minerals	mg/L <sup>1</sup>	24-hour composite

<sup>1.</sup> mg/L or ug/L, as appropriate.

### **Crusher/Press Wastewater**

The Discharger shall monitor crusher/press wastewater at EFF-002 as follows. Crusher/press wastewater samples shall be representative of the volume and nature of the discharges. Time of collection of the samples shall be recorded. Crusher/press wastewater monitoring shall include at least the following:

<u>Frequency<sup>1</sup></u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Continuous	Flow	mgd	Meter
Weekly	pH	pH Units	Grab
Twice Monthly	Electrical Conductivity	umhos/cm	24-hour composite
Twice Monthly	Total Dissolved Solids	mg/L	24-hour composite
Twice Monthly	Fixed Dissolved Solids	mg/L	24-hour composite
Twice Monthly	Biochemical Oxygen Demand	mg/L	24-hour composite
Twice Monthly	Nitrite as Nitrogen	mg/L	24-hour composite
Twice Monthly	Nitrate as Nitrogen	mg/L	24-hour composite
Twice Monthly	Ammonia Nitrogen	mg/L	24-hour composite
Twice Monthly	Total Nitrogen	mg/L	24-hour composite
Monthly	General Minerals	mg/L <sup>2</sup>	24-hour composite

<sup>1.</sup> When Operating

<sup>2.</sup> mg/L or ug/L, as appropriate.

### **Stillage Wastewater**

For the discharge of stillage wastewater to the anaerobic treatment system and/or the Fresno WWTF, the Discharger shall monitor the stillage wastewater as follows. The Discharger shall monitor Stillage wastewater at EFF-003. Stillage wastewater samples shall be collected prior to mixing with other waste streams and shall be representative of the volume and nature of the stillage discharges. Time of collection of the samples shall be recorded. Stillage wastewater monitoring shall include at least the following:

<u>Frequency<sup>1</sup></u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Continuous	Flow	mgd	Meter
Weekly	pH	pH Units	Grab
Twice Monthly	Electrical Conductivity	umhos/cm	24-hour composite
Twice Monthly	Total Dissolved Solids	mg/L	24-hour composite
Twice Monthly	Fixed Dissolved Solids	mg/L	24-hour composite
Twice Monthly	Biochemical Oxygen Demand	mg/L	24-hour composite

<u>Frequency</u> <sup>1</sup>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Twice Monthly	Nitrite as Nitrogen	mg/L	24-hour composite
Twice Monthly	Nitrate as Nitrogen	mg/L	24-hour composite
Twice Monthly	Ammonia Nitrogen	mg/L	24-hour composite
Twice Monthly	Total Nitrogen	mg/L	24-hour composite
Annually	General Minerals	mg/L <sup>2</sup>	24-hour composite

1. When operating

2. mg/L or ug/L, as appropriate.

WDRs R5-2015-\_\_\_\_ allows for the discharge of untreated stillage wastewater (not treated in the anaerobic treatment system) to the land application areas only during maintenance of the anaerobic treatment system (Discharge Prohibition A.6). Should stillage wastewater be discharged to the land application areas the Discharger shall monitor the stillage wastewater at EFF-03 as follows.

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Continuous	Flow	mgd	Meter
Daily <sup>1</sup>	pH	pH Units	Grab
Daily <sup>1</sup>	Electrical Conductivity	umhos/cm	24-hour composite
Daily <sup>1</sup>	Total Dissolved Solids	mg/L	24-hour composite
Daily <sup>1</sup>	Fixed Dissolved Solids	mg/L	24-hour composite
Daily <sup>1</sup>	Biochemical Oxygen Demand	mg/L	24-hour composite
Daily <sup>1</sup>	Nitrite as Nitrogen	mg/L	24-hour composite
Daily <sup>1</sup>	Nitrate as Nitrogen	mg/L	24-hour composite
Daily <sup>1</sup>	Ammonia Nitrogen	mg/L	24-hour composite
Daily <sup>1</sup>	Total Nitrogen	mg/L	24-hour composite
Once	General Minerals	mg/L <sup>2</sup>	24-hour composite

1. Samples shall be collected once per day for each day of the discharge.

2. mg/L or ug/L, as appropriate

### Ion Exchange Regenerate Wastewater

The Discharger shall monitor the ion exchange regenerate wastewater at EFF-004. Ion exchange regenerate wastewater samples shall be collected prior to adding to the compost and shall be representative of the volume and nature of the ion exchange regenerate applications. Time of collection of the samples shall be recorded. Ion exchange regenerate wastewater monitoring shall include at least the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Continuous <sup>1</sup>	Flow	mgd	Meter
Monthly <sup>2</sup>	pH	pH Units	Grab
Monthly <sup>2</sup>	Electrical Conductivity	umhos/cm	24-hour composite
Monthly <sup>2</sup>	Total Dissolved Solids	mg/L	24-hour composite
Monthly <sup>2</sup>	Fixed Dissolved Solids	mg/L	24-hour composite
Monthly <sup>2</sup>	Biochemical Oxygen Demand	mg/L	24-hour composite

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Monthly <sup>2</sup>	Nitrite as Nitrogen	mg/L	24-hour composite
Monthly <sup>2</sup>	Nitrate as Nitrogen	mg/L	24-hour composite
Monthly <sup>2</sup>	Ammonia Nitrogen	mg/L	24-hour composite
Monthly <sup>2</sup>	Total Nitrogen	mg/L	24-hour composite
Monthly <sup>2,3</sup>	General Minerals	mg/L <sup>1</sup>	24-hour composite

1. When in operation.
2. Samples of the ion exchange shall be collected and analyzed monthly unless no ion exchange regenerate was generated.
3. mg/L or ug/L, as appropriate

### **GROUNDWATER MONITORING**

After measuring water levels and prior to collecting samples, each monitoring well (MW-1 through MW-6, MW-5a, MW-5b, MW-8, MW-18-1, and MW-18-2) shall be adequately purged to remove water that has been standing within the well screen and casing that may not be chemically representative of formation water. Depending on the hydraulic conductivity of the geologic setting, the volume removed during purging is typically from 3 to 5 volumes of the standing water within the well casing and screen, or additionally the filter pack pore volume.

The Discharger shall monitor all wells in its Groundwater Monitoring Network, and any additional wells installed, for the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Quarterly	Depth to Groundwater	Feet <sup>1</sup>	Measured
Quarterly	Groundwater Elevation	Feet <sup>2</sup>	Computed
Quarterly	pH	pH Units	Grab
Quarterly	EC	umhos/cm	Grab
Quarterly	Nitrite as Nitrogen	mg/L	Grab
Quarterly	Nitrate as Nitrogen	mg/L	Grab
Quarterly	Ammonia Nitrogen	mg/L	Grab
Quarterly	Total Nitrogen	mg/L	Grab
Quarterly	Total Organic Carbon	mg/L	Grab
Quarterly <sup>3</sup>	General Minerals	mg/L <sup>3</sup>	Grab

1. To the nearest hundredth of a foot.
2. To the nearest hundredth of a foot above Mean Sea Level.
3. mg/L or ug/L, as appropriate

The Discharger shall maintain its groundwater monitoring well network. If a groundwater monitoring well(s) are dry for more than four consecutive sampling events, the Discharger shall submit a work plan and proposed time schedule to replace the well(s). The well(s) shall be replaced following written Executive Officer approval of the work plan and time schedule.

### **SOURCE WATER MONITORING**

The Discharger shall collect samples at PW-5 through PW-8 and any wells added, and analyze them for the constituents specified in the following table. If the source water is from more than one well, the results shall also be presented as a flow weighted average of all the wells used.

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Semi-Annually	EC	mg/L	Grab/Computed average
Semi-Annually	TDS	mg/L	Grab/Computed average
Semi-Annually	Nitrite as Nitrogen	mg/L	Grab/Computed average
Semi-Annually	Nitrate as Nitrogen	mg/L	Grab/Computed average
Semi-Annually	Ammonia Nitrogen	mg/L	Grab/Computed average
Semi-Annually	Total Nitrogen	mg/L	Grab/Computed average
Annually	General Minerals	mg/L <sup>1</sup>	Grab/Computed average

<sup>1.</sup> mg/L or ug/L, as appropriate.

### LAND APPLICATION AREA MONITORING

The Discharger shall monitor the land application areas daily throughout the processing season and while wastewater is being discharged. The volume of the effluent applied will be monitored at EFF-001, EFF-002, and/or EFF-03. The monitoring report shall identify the source and volume of the effluent applied, the specific parcels to which it is applied, the acreage to which it is applied, and the type of crops grown on each parcel. This information shall be submitted as part of the annual monitoring report in addition to a map, which shows the specific parcels that received winery effluent.

In addition, the Discharger shall perform the following routine monitoring and loading calculations for each discrete irrigation area within the land application areas. If supplemental irrigation water is used, samples shall be collected from its source (e.g. FID-1 or IW-1 through IW-3). The data shall be collected and presented in both a graphical (map) and tabular format and shall include the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Daily <sup>1</sup>	Application area	Acres	n/a
Daily <sup>1</sup>	Wastewater flow	Gallons	Metered
Daily <sup>1</sup>	Wastewater loading	Inches/day	Metered
Daily <sup>1</sup>	Supplemental irrigation	Inches/day	Metered
Daily <sup>1</sup>	Precipitation	Inches	Rain gage <sup>2</sup>
Monthly	Total Hydraulic loading <sup>3</sup>	Inches/acre-month	Calculated
<u>BOD Loading<sup>4</sup></u>			
Daily <sup>1</sup>	Day of application	lbs/ac/day	Calculated
Cycle	Cycle average	lbs/ac/day	Calculated cycle average
<u>Nitrogen loading<sup>4</sup></u>			
Annual	From wastewater	lbs/ac/yr	Calculated

Annual	From fertilizers	lbs/ac/yr	Calculated
Annual	From supplemental irrigation water	lbs/ac/yr	Calculated

**Salt loading**

Annual	From wastewater	lbs/ac/yr	Calculated
Annual	From supplemental irrigation water	lbs/ac/yr	Calculated

1. Throughout the crush season (typically August through November), and when wastewater is applied to the land application areas during the non-crush season.
2. National Weather Service or CIMIS data from the nearest weather station is acceptable.
3. Combined loading from wastewater, irrigation water, and precipitation.
4. The BOD and nitrogen loading rate shall be calculated using the applied volume of wastewater, applied acreage, and average of the four most recent BOD and total nitrogen analytical results.

In addition, the Discharger shall inspect the application areas on a daily basis when wastewater is being applied. Evidence of erosion, field saturation, runoff, or the presence of nuisance conditions (i.e., flies, ponding, etc.) shall be noted in field logs and kept on site.

**COMPOSTING FACILITY MONITORING**

The Discharger shall monitor the storm water/leachate collection sumps at the composting facility on a daily basis during rain events, and on a monthly basis during non-rain periods. If storm water and/or leachate are present, the Discharge shall collect samples from the sumps monthly at CMP-01 and analyze them for the constituents specified in the following table.

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Daily	Volume/Flow	mgd	Meter
Monthly	pH	pH Units	Grab
Monthly	Electrical Conductivity	umhos/cm	Grab
Monthly	Total Dissolved Solids	mg/L	Grab
Monthly	Fixed Dissolved Solids	mg/L	Grab
Monthly	Biochemical Oxygen Demand	mg/L	Grab
Monthly	Nitrite as Nitrogen	mg/L	Grab
Monthly	Nitrate as Nitrogen	mg/L	Grab
Monthly	Ammonia Nitrogen	mg/L	Grab
Monthly	Total Nitrogen	mg/L	Grab
Monthly	General Minerals	mg/L <sup>1</sup>	Grab

<sup>1</sup> mg/L or ug/L, as appropriate.

In addition, the Discharger shall inspect the composting facility on a daily basis and record the volume of compost generated daily. The Discharger shall also record the volume and the date of application of ion exchange regenerate or any other liquid used for moisture control of the compost windrows. This information shall be submitted as part of the annual monitoring report, that details the annual volume of compost generated and the amount of ion exchange regenerate applied to the compost. Evidence of erosion, windrow saturation,

runoff, or the presence of nuisance conditions (i.e., flies, ponding, etc.) shall be noted in field logs and kept on site.

### SOIL MONITORING

The Discharger shall establish, with the concurrence of Central Valley Water Board staff, representative soil profile monitoring locations within and outside of the land application areas and at least two representative background location(s) (i.e., that historically have not received process wastewater). The Discharger shall submit a map to the Central Valley Water Board with the identified sample locations no fewer than **60 days** prior to the first soil sampling event following adoption of this Order. The samples shall be collected and analyzed for the constituents and frequencies specified in the following table:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Annually	Soil pH	pH units	6 feet <sup>1</sup>
Annually	Buffer pH	mg/kg as CaCO <sub>3</sub>	6 feet <sup>1</sup>
Annually	Sodium	mg/kg	6 feet <sup>1</sup>
Annually	Chloride	mg/kg	6 feet <sup>1</sup>
Annually	Nitrate as nitrogen	mg/kg	6 feet <sup>1</sup>
Annually	Total Kjeldahl Nitrogen	mg/kg	6 feet <sup>1</sup>

<sup>1.</sup> Samples to be analyzed shall be collected at depths of 6-inches, 2, 4, and 6 feet below the ground surface (bgs)

### VADOSE ZONE MONITORING

Installation and sampling of the lysimeters shall be conducted in accordance with the approved Work Plan. The samples shall be collected and analyzed for the constituents and frequencies specified below:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Quarterly <sup>1</sup>	pH	s.u.	Grab <sup>2</sup>
Quarterly <sup>1</sup>	EC	umhos/cm	Grab <sup>2</sup>
Quarterly <sup>1</sup>	BOD <sub>5</sub>	mg/L	Grab <sup>2</sup>

<sup>1.</sup> Samples to be collected immediately following application of wastewater to the area where each lysimeter is located.

<sup>2.</sup> Samples to be collected at depths of 2, 5, and 10 feet bgs.

### REPORTING

All monitoring results shall be reported in **Quarterly Monitoring Reports**, which are due by the first day of the second month after the calendar quarter. Therefore, monitoring reports are due as follows:

- First Quarter Monitoring Report: **1 May**
- Second Quarter Monitoring Report: **1 August**
- Third Quarter Monitoring Report: **1 November**
- Fourth Quarter Monitoring Report: **1 February.**

**A transmittal letter shall accompany each monitoring report.** The transmittal letter shall discuss any violations that occurred during the reporting period and all actions taken or planned for correcting violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions or a time schedule for implementing the corrective actions, reference to the previous correspondence is satisfactory.

The following information is to be included on all monitoring reports, as well as report transmittal letters:

E. & J. Gallo  
Fresno Winery  
MRP Order R5-2014-\_\_\_\_  
Contact Information (telephone and email)

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner that illustrates clearly, whether the Discharger complies with waste discharge requirements.

In addition to the details specified in Standard Provision C.3, monitoring information shall include the method detection limit (MDL) and the Reporting limit (RL) or practical quantitation limit (PQL). If the regulatory limit for a given constituent is less than the RL (or PQL), then any analytical results for that constituent that are below the RL (or PQL) but above the MDL shall be reported and flagged as estimated.

Laboratory analysis reports do not need to be included in the monitoring reports; however, the laboratory reports must be retained for a minimum of three years in accordance with Standard Provision C.3.

All monitoring reports shall comply with the signatory requirements in Standard Provision B.3. All monitoring reports that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1.

At any time henceforth, the State or Central Valley Regional Water Board may notify the Discharger to electronically submit monitoring reports using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>) or similar system. Until such notification is given, the Discharger shall submit hard copy monitoring reports.

**A. All Quarterly Monitoring Reports** shall include the following:

**Wastewater Reporting:**

1. The results of influent and effluent monitoring specified on pages 3 through 6.
2. For each month of the quarter, calculation of the maximum daily flow and the monthly average flows from each the wastewater streams.
3. For each month of the quarter, calculation of the 12-month rolling average EC of the discharges using the EC value for that month averaged with the EC values for the previous 11 months for each discharge.
4. A summary of daily BOD loading rates.

#### **Groundwater Reporting:**

1. The results of groundwater monitoring specified on pages 6 and 7.
2. For each monitoring well, a table showing constituent concentrations for at least the last five quarters, up through the current quarter.
3. A groundwater contour map based on groundwater elevations for that quarter. The map shall show the gradient and direction of groundwater flow under/around the facility and/or effluent disposal area(s). The map shall also include the locations of monitoring wells and wastewater storage and discharge areas.

#### **Source Water Reporting**

1. For each quarter, the results of the source water monitoring specified on page 7. Results must include supporting calculations.

#### **Land Application Area Reporting**

1. The results of the monitoring and reporting and loading calculations specified on pages 7 and 8.
2. For each month that wastewater is applied to the land application areas, calculation of the monthly hydraulic load for wastewater and supplemental irrigation water in millions of gallons and/or acre-feet to each discrete irrigation area.
3. A summary of the notations made in the land application areas log during each quarter. The entire contents of the log do not need to be submitted.
4. For each month, calculation of the daily BOD cycle average using the BOD results for the month.

#### **Compost Facility Reporting**

1. For each quarter, the results of the storm water/leachate monitoring at the composting facility specified on pages 8 and 9.

#### **Vadose Zone Reporting**

1. The results of the quarterly monitoring specified on page 10.

**B. Fourth Quarter Monitoring Reports**, in addition to the above, shall include the following:

**Winery Information:**

1. The names and general responsibilities of all persons in charge of wastewater treatment and disposal.
2. The names and telephone numbers of persons to contact regarding the Winery for emergency and routine situations.
3. A statement certifying when the flow meters and other monitoring instruments and devices were last calibrated, including identification of who performed the calibrations (Standard Provision C.4).
4. A statement whether the current operation and maintenance manual, sampling plan, nutrient management plan, and contingency plan, reflect the Winery currently constructed and operated, and the dates when these documents were last reviewed for adequacy.
5. A summary of any changes in processing that might affect waste characterization and/or discharge flow rates.

**Solids Reporting**

1. Annual production of totals solids (excluding trash and recyclables) in dry tons or cubic yards.
2. A description of disposal methods, including the following information related to the disposal methods used. If more than one method is used, include the percentage disposed of by each method.
  - a. For landfill disposal, include: the name and location of the landfill, and the Order number of WDRs that regulate it.
  - b. For land application, include: the location of the site, and the Order number of any WDRs that regulate it.
  - c. For incineration, include: the name and location of the site where incineration occurs, the Order number of WDRs that regulate the site, the disposal method of ash, and the name and location of the facility receiving ash (if applicable).
  - d. For composting, include: the location of the site, and the Order number of any WDRs that regulate it.
  - e. For animal feed, include: the location of the site, and the Order number of any WDRs that regulate it.

## Soils Reporting

1. The results of soil monitoring specified on page 9. The analytical results should be presented in tabular form and include depth of sample. If no sample is collected at a specified depth it should be noted in the table along with the reason no sample was collected.
2. A site map showing the location of each sampling point. The map shall also include the locations of all monitoring wells and wastewater storage and/or discharge areas.

## Land Application Area Reporting

1. The type of crop(s) grown, planting and harvest dates, and the quantified nitrogen and fixed dissolved solids uptake (determined by representative plant tissue analysis). Include any soil and/or tissue sampling results.
2. The monthly and annual discharge volumes during the reporting year expressed as million gallons and inches.
3. A monthly balance for the reporting year that includes:
  - a. Monthly average  $ET_0$  (observed evapotranspiration) – Information sources include California Irrigation Management Information System (CIMIS) <http://www.cimis.water.ca.gov/>
  - b. Monthly crop uptake
    - i. Crop water utilization rates are available from a variety of publications available from the local University of California Davis extension office.
    - ii. Irrigation efficiency – Frequently, engineers include a factor for irrigation efficiency such that the application rate is slightly greater than the crop utilization rate. A conservative design does not include this value.
  - c. Monthly average precipitation – this data is available at <http://www.cimis.water.ca.gov/> or <http://www.ncdc.noaa.gov/oa/climate/online/ccd/nrmlprcp.html>.
  - d. Monthly average and annual average discharge flow rate.
4. A summary of daily and cycle average BOD loading rates.
5. The total pounds of nitrogen applied to the land application areas from all sources (wastewaters, fertilizers, and irrigation waters) as calculated from the sum of the monthly loadings to the land application areas in lbs/ac/yr.
6. The total pounds of FDS that have been applied to the land application areas, as calculated from the sum of the monthly loadings to the land application areas in lbs/ac/yr.

The Discharger shall implement the above monitoring program on the first day of the month following adoption of this Order.

Ordered by:

\_\_\_\_\_  
PAMELA C. CREEDON, Executive Officer

\_\_\_\_\_  
(Date)

## GLOSSARY

BOD <sub>5</sub>	Five-day biochemical oxygen demand
CBOD	Carbonaceous BOD
DO	Dissolved oxygen
EC	Electrical conductivity at 25° C
FDS	Fixed dissolved solids
NTU	Nephelometric turbidity unit
TKN	Total Kjeldahl nitrogen
TDS	Total dissolved solids
TSS	Total suspended solids
Continuous	The specified parameter shall be measured by a meter continuously.
24-Hour Composite	Unless otherwise specified or approved, samples shall be a flow-proportioned composite consisting of at least eight aliquots.
Daily	Samples shall be collected every day.
Twice Weekly	Samples shall be collected at least twice per week on non-consecutive days.
Weekly	Samples shall be collected at least once per week.
Twice Monthly	Samples shall be collected at least twice per month during non-consecutive weeks.
Monthly	Samples shall be collected at least once per month.
Bimonthly	Samples shall be collected at least once every two months (i.e., six times per year) during non-consecutive months
Quarterly	Samples shall be collected at least once per calendar quarter. Unless otherwise specified or approved, samples shall be collected in January, April, July, and October.
Semiannually	Samples shall be collected at least once every six months (i.e., two times per year). Unless otherwise specified or approved, samples shall be collected in April and October.
Annually	Samples shall be collected at least once per year. Unless otherwise specified or approved, samples shall be collected in October.
mg/L	Milligrams per liter
mL/L	Milliliters [of solids] per liter
µg/L	Micrograms per liter
µmhos/cm	Micromhos per centimeter
mgd	Million gallons per day
MPN/100 mL	Most probable number [of organisms] per 100 milliliters
General Minerals	Analysis for General Minerals shall include at least the following: Alkalinity                      Chloride                      Sodium Bicarbonate                      Hardness                      Sulfate Calcium                              Magnesium                      TDS Carbonate                              Potassium
	General Minerals analyses shall be accompanied by documentation of cation/anion balance.