CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM R5-2012-_____

FOR
WILDHURST VINEYARDS
WASTEWATER TREATMENT FACILITY
LAKE COUNTY

This Monitoring and Reporting Program (MRP) incorporates requirements for monitoring of the **i**nfluent flow, wastewater ponds, septic system, effluent, land application areas, solids, and groundwater. This MRP is issued pursuant to Water Code section 13267. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer.

All wastewater samples should be representative of the volume and nature of the discharge. The time, date, and location of each grab sample shall be recorded on the sample chain of custody form. Winery wastewater flow monitoring shall be conducted continuously using a flow meter and shall be reported in cumulative gallons per day.

Field test instruments (such as pH and dissolved oxygen) may be used provided that:

1. The operator is trained in the proper use of the instrument;
2. The instruments are field calibrated prior to each use;
3. Instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
4. Field calibration reports are submitted as described in the "Reporting" section of this MRP.

INFLUENT FLOW MONITORING

Effective 1 October 2012 or on the first day discharge to the ponds, whichever occurs first, winery wastewater samples shall be collected from Settling Tank 2 prior to discharge into the wastewater treatment ponds. Monitoring shall include at least the following:

Constituents	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Flow	gpd	Continuous	Daily[1]	Monthly
Total Flow[1]	gallons	Continuous	Totalizer[1]	Monthly

[1] Continuous monitoring requires daily meter reading or automated data collection using a meter equipped with a totalizer. Total flow means the cumulative total for the calendar year.

WASTEWATER POND MONITORING

Effective 1 October 2012 or on the first day of discharge to the ponds, whichever occurs first, monitoring of all ponds shall include, at a minimum, the following parameters listed below. Freeboard shall be measured vertically from the surface of the pond water to the lowest elevation of the surrounding berm and shall be measured to the nearest 0.1 feet.

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Dissolved Oxygen [1]	mg/L	Grab	Weekly	Monthly
Freeboard	feet (±0.1)	Measurement	Weekly	Monthly
pH	pH Units	Grab	Weekly	Monthly
Electrical Conductivity	umhos/cm	Grab	Weekly	Monthly
Odors	--	Observation	Weekly	Monthly
Berm Condition [2]	--	Observation	Weekly	Monthly
Leak Detection System [3]	--	Observation	Weekly	Monthly
Sludge Depth	--	Measurement	Annually	Annually [4]

[1] Samples shall be collected at a depth of one foot, opposite the inlet. Samples shall be collected between 0700 and 0900 hours.
[2] Containment levees shall be observed for signs of erosion, burrowing rodents or other damage.
[3] If water is detected, then a sample shall be collected and tested for total dissolved solids. Results shall be reported in the monthly report for the month during which monitoring occurred.
[4] Results of sludge depth monitoring shall be reported in the Annual Monitoring Report.

SEPTIC SYSTEM MONITORING

Effective immediately and continuing until 1 October 2012 or the first day of discharge to the ponds, whichever occurs first, the wastewater in the existing industrial septic system shall be sampled and monitored for the following constituents listed below.

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Total Nitrogen	mg/L	Grab	Monthly	Monthly
Fixed Dissolved Solids	mg/L	Grab	Monthly	Monthly
Total Phosphorus	mg/L	Grab	Monthly	Monthly

EFFLUENT MONITORING

Effective 1 October 2012 or on the first day of discharge to the ponds, whichever occurs first, treated wastewater samples shall be collected from the downstream treatment pond, Pond 2 (unblended) and/or an established sampling station (blended) that will provide representative samples of the wastewater that will be applied to land. Flow monitoring of the outflow from Pond 2 to the LAA shall be reported in accordance with the Land Application Area Monitoring section of this MRP. Effluent monitoring shall include at a minimum, the following:

Constituent	**Units**	**Type of Sample**	**Sampling Frequency**	**Reporting Frequency**
Biochemical Oxygen Demand	mg/L	Grab	Weekly	Monthly
Nitrate as Nitrogen	mg/L	Grab	Monthly	Monthly
Total Kjeldahl Nitrogen	mg/L	Grab	Monthly	Monthly
Total Dissolved Solids	mg/L	Grab	Monthly	Monthly
Fixed Dissolved Solids	mg/L	Grab	Monthly	Monthly
Total Phosphorus	mg/L	Grab	Monthly	Monthly

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
General Minerals [1]	mg/L	Grab	Quarterly	Quarterly[2]

[1] General minerals include the following: boron, calcium, chloride, iron, magnesium, manganese, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness.

[2] Results for constituents monitored quarterly shall be reported in the monthly monitoring report for the month during which samples were obtained.

LAND APPLICATION AREA MONITORING

Effective 1 October 2012 or on the first day of discharge to the ponds, whichever occurs first, the Discharger shall monitor treated wastewater discharged for irrigation to the land application area. Monitoring shall be conducted **daily during operation** and the results shall be included in the monthly monitoring report. Evidence of erosion, field saturation, runoff, or the presence of nuisance conditions shall be noted in the report. Loading rates for the land application areas shall be calculated using applied wastewater and any supplemental irrigation water. Samples only need be collected during the irrigation season. If irrigation does not occur during a reporting period, the monitoring report shall so state. Monitoring of the land application areas shall include the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Supplemental Irrigation Water Flow	gpd	Continuous	Daily	Monthly
Wastewater Flow [1]	gpd	Continuous	Daily	Monthly
Local Rainfall [2]	inches	Local Gauge Station	Daily	Monthly
Acreage Applied	acres	Calculated	Daily	Monthly
Application Rate	gal/acre·day	Calculated	Daily	Monthly
BOD Loading Rate	lbs/acre·day	Calculated	Daily	Monthly
Total Nitrogen Loading Rate [3]	lbs/acre·month[4]	Calculated	Monthly	Monthly
TDS Loading Rate	lbs/acre·month[4]	Calculated	Monthly	Monthly
FDS Loading Rate	lbs/acre·month[4]	Calculated	Monthly	Monthly
Crop Removal Mass	pounds	Measured	Monthly	Monthly

[1] Continuous monitoring requires daily meter reading or automated data collection and shall define the volume of wastewater discharged to the land application areas from the wastewater treatment pond 2

[2] Data may be obtained from a Department of Water Resource gauge station.

[3] Total nitrogen applied from all sources, including fertilizers and supplemental irrigation water if used.

[4] Report monthly total and cumulative annual to date.

At least **once per week** when treated wastewater is being applied to the land application areas, the entire application area shall be inspected and observations from those inspections shall be documented for inclusion in the monthly monitoring reports. If no irrigation with wastewater takes place during a given month, then the monthly monitoring report shall so state. The following items shall be documented for each check or field to be irrigated:

1. Evidence of erosion;
2. Containment berm condition;
3. Soil saturation;
4. Ponding;
5. Tailwater ditches and potential runoff to off-site areas;
6. Potential and actual discharge to surface waters; and
7. Odors that have the potential to be objectionable at or beyond the property boundary.

SOLIDS MONITORING

Effective immediately, the Discharger shall report monthly the generation rate, application, and storage of any industrial residual solids (pomace and/or diatomaceous earth). The following items shall be reported:

1. Amount of solids generated;
2. Amount of solids stored (including location of storage and measures implemented to prevent leachate generation or control and disposal of any leachate that is generated;
3. Amount applied on-site as a soil amendment; and
4. If applicable, amount applied off-site at an appropriate permitted facility (including amount disposed off-site, location of disposal site, and hauler identification).

GROUNDWATER MONITORING

Effective immediately, the Discharger shall monitor groundwater quality in accordance with the following. Prior to construction and/or sampling of any groundwater monitoring wells, the Discharger shall submit plans and specifications to the Central Valley Water Board for approval. Any new wells may be added to the monitoring network (which currently consists of Monitoring Wells MW-1, MW-2, and MW-3) and shall be sampled and analyzed according to the schedule below. All samples shall be collected using approved EPA methods or the latest edition of *Standard Methods*. Water table elevations shall be calculated to determine groundwater gradient and direction of flow.

Prior to sampling, the groundwater elevations shall be measured and the wells shall be purged of at least three well volumes until temperature, pH, and electrical conductivity have stabilized. Depth to groundwater shall be measured to the nearest 0.01 feet. Groundwater monitoring shall include, at a minimum, the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Depth to Groundwater	±0.01 feet	Measurement	Quarterly	Quarterly
Groundwater Elevation[1]	±0.01 feet	Calculated	Quarterly	Quarterly
Gradient	feet/feet	Calculated	Quarterly	Quarterly
Gradient Direction	Degrees	Calculated	Quarterly	Quarterly
pH	pH units	Grab	Quarterly	Quarterly
Electrical Conductivity	umhos/cm	Grab	Quarterly	Quarterly
Total Kjeldahl Nitrogen	mg/L	Grab	Quarterly	Quarterly
Nitrate as Nitrogen	mg/L	Grab	Quarterly	Quarterly

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Total Dissolved Solids	mg/L	Grab	Quarterly	Quarterly
Total Phosphorus	mg/L	Grab	Quarterly	Quarterly
General Minerals[2]	mg/L	Grab	Quarterly	Quarterly

[1] Groundwater elevation shall be determined based on depth-to-water measurements from a surveyed measuring point elevation on the well.

[2] General Minerals include the following: boron, calcium, chloride, iron, magnesium, manganese, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness.

REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., wastewater pond monitoring, groundwater monitoring well, etc.), and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported in the next scheduled monitoring report.

As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all groundwater monitoring reports shall be prepared under the direct supervision of a registered professional engineer or geologist and signed by the registered professional.

A. Monthly Monitoring Reports

Effectively immediately, monthly reports shall be submitted to the Central Valley Water Board by the **1st day of the second month** following the end of the reporting period (i.e. the January monthly report is due by 1 March). The monthly reports shall include the following:

1. Results of influent flow, wastewater pond, septic system, effluent, land application area, and solids monitoring.
2. A comparison of monitoring data to the discharge specifications and effluent limitations, disclosure of any violations of the WDRs, and an explanation of any violation of those requirements. Data shall be presented in tabular format.
3. If requested by staff, copies of laboratory analytical report(s);
4. A calibration log verifying calibration of all hand held monitoring instruments and devices used to comply with the prescribed monitoring program;
5. The cumulative volume of wastewater generated during the year to date;
6. The total pounds of total dissolved solids and fixed dissolved solids (year to date) that have been applied to the land application areas, as calculated from the sum of monthly loadings;
7. The total pounds of nitrogen (year to date, from all sources including fertilizer) applied to the land application area as calculated from the sum of monthly loadings; and

8. A summary of the quantity of solid waste (stems, pomace, diatomaceous earth, pond sludge**,** crops removed, etc.) generated and disposed of on-site as a soil amendment or off-site at an appropriately permitted facility.

B. Quarterly Monitoring Reports

Effective immediately, in addition to the monthly reports, the Discharger shall establish a quarterly sampling schedule for groundwater monitoring such that samples are obtained approximately every three months. Quarterly monitoring reports shall be submitted to the Water Quality Control Board by the **1st day of the second month after the quarter** (i.e. the January-March quarter is due by May 1st) each year. The Quarterly Report submittal schedule is shown in the table below.

Quarter	Month	Quarterly Report Due Date
First	January – March	1 May
Second	April – June	1 August
Third	July – September	1 November
Fourth	October - December	1 February

The Quarterly Report shall include the following:

1. Results of groundwater monitoring;
2. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the groundwater monitoring. The narrative shall be sufficiently detailed to verify compliance with the WDR, this MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs for each well documenting depth to groundwater; parameters measured before, during, and after purging; method of purging; calculation of casing volume; and total volume of water purged;
3. Calculation of groundwater elevations, an assessment of groundwater flow direction and gradient on the date of measurement, comparison of previous flow direction and gradient data, and discussion of seasonal trends if any;
4. A narrative discussion of the analytical results for all groundwater locations monitored including spatial and temporal trends, with reference to summary data tables, graphs, and appended analytical reports (as applicable);
5. A comparison of monitoring data to the groundwater limitations and an explanation of any violation of those requirements;
6. Summary data tables of historical and current water table elevations and analytical results;
7. A scaled map showing relevant structures and features of the facility, the locations of monitoring wells and any other sampling stations, and groundwater elevation contours referenced to mean sea level datum; and
8. Copies of laboratory analytical report(s) for groundwater monitoring.

C. Annual Report

Effective immediately, in addition to the monthly and quarterly reports, an annual report shall be prepared. The Annual Report shall be submitted to the Central Valley Water Board by **1 February** each year. At a minimum, the Annual Report shall include the following:

1. Tabular and graphical summaries of all data collected during the year.
2. Tabular and graphical summaries of historical monthly total loading rates for wastewater generation, treated wastewater used for irrigation (hydraulic loading in gallons/acre and inches), total nitrogen (lbs/ac/yr), total dissolved solids (lbs/ac/yr), and fixed dissolved solids (lbs/ac/yr). Tabular and graphical summaries of historical annual wastewater flow (million gallons).
3. A comprehensive evaluation of the effectiveness of the past year's wastewater application operation in terms of odor control and groundwater protection, including consideration of application management practices (e.g.: waste constituent and hydraulic loadings, application cycles, drying times, and cropping practices), and groundwater monitoring data.
4. A summary of the vegetative material (crops) removed from the LAAs. The summary shall include harvest dates, crop type, disposal area, and estimated ash content of the harvest.
5. A summary of the quantity of solid waste (lees, stems, pomace, diatomaceous earth, etc.) generated and disposed of on-site as a soil amendment or off-site at an appropriately permitted facility.
6. An evaluation of the groundwater quality beneath the land application area.
7. Beginning with the 2014 Annual Report, use the updated groundwater values found in the report required by Provisions G.1.h. A comparison of background data for each constituent identified in Groundwater Limitations F.1 to data from downgradient monitoring wells if an interwell analysis method is used, or to current quarterly data if an intrawell analysis method is used. Monitoring data shall also be compared to water quality objectives, where applicable, for each constituent identified in the Groundwater Limitations.
8. A description of source control methods that have been implemented in the calendar year.
9. Estimated flows for the next calendar year.
10. A discussion of compliance and corrective actions taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements.
11. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program.

A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall

include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain a statement by the Discharger, or the Discharger's authorized agent, under penalty of perjury, that to the best of the signer's knowledge the report is true, accurate and complete.

The Discharger shall implement the above monitoring program as of the date of this Order.

Ordered by: _____
PAMELA C. CREEDON, Executive Officer

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(Date)

LLA:022311