CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO.

FOR
GUENOC WINERY, INC
GUENOC WINERY
LAKE COUNTY

This monitoring and reporting program (MRP) incorporates requirements for monitoring of the industrial process wastewater 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 sample shall be recorded on the sample chain of custody form. Field test instruments (such as pH and dissolved oxygen) may be used provided that:

1. The operator is trained in the proper use and maintenance 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.

VAULT MONITORING

At least once per year, the Discharger shall inspect the 600-gallon concrete vault in the parking lot for visible leaks or structural problems. The inspection results shall be described in the annual report.

BIOREACTOR INFLUENT MONITORING

Upon adoption of this Order, process wastewater samples shall be collected prior to entering the wastewater ponds. Once the Bioreactor is constructed and operational, process wastewater samples shall be collected prior to entering the Bioreactor. Monitoring shall include at least the following:

Constituents	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Total Dissolved Solids	mg/L	Grab	Monthly	Monthly
BOD_5[2]	mg/L	Grab	Monthly	Monthly

[1] Five-day, 20° Celsius Biochemical Oxygen Demand.

BIOREACTOR EFFLUENT MONITORING

Upon adoption of this order, effluent samples shall be collected from storage pond No. 4. Once the Bioreactor is constructed and operational, samples shall be collected of the treated wastewater exiting the Bioreactor system, prior to discharge into the pond(s). Flow monitoring shall be conducted continuously using a flow meter and shall be reported in cumulative gallons per day. Effluent

monitoring shall include the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Flow	Gallons	Metered	Continuous[1]	Monthly
pH	pH units	Grab	Weekly	Monthly
Total Suspended Solids	mg/L	Grab	Monthly[3]	Monthly
BOD_5[2]	mg/L	Grab	Monthly[3]	Monthly
Nitrates as Nitrogen	mg/L	Grab	Monthly[3]	Monthly
Total Kjeldahl Nitrogen	mg/L	Grab	Monthly[3]	Monthly
Total Dissolved Solids	mg/L	Grab	Monthly[3]	Monthly
Sulfate	mg/L	Grab	Monthly[3]	Monthly
Chloride	mg/L	Grab	Monthly[3]	Monthly

[1]Continuous monitoring requires daily meter reading or automated data collection.
[2] Five-day, 20° Celsius Biochemical Oxygen Demand.
[3] Weekly for the first three months of operation, and then monthly thereafter.

POND MONITORING

Samples shall be collected from an established sampling station located in an area that will provide a sample representative of the water in the pond(s). 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. Monitoring of each pond shall include, at a minimum, the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Dissolved Oxygen[1]	mg/L	Grab	Weekly	Monthly
Freeboard	feet (±0.1)	Measurement	Weekly	Monthly
Odors	--	Observation	Weekly	Monthly
Berm Seepage[2]	NA	Observation	Weekly	Monthly

[1] Samples shall be collected at a depth of one foot from each pond in use, opposite the inlet. Samples shall be collected between 0700 and 0900 hours.
[2] Containment levees shall be observed for signs of seepage or surfacing water along the exterior toe of the levees. If surfacing water is found, then a sample shall be collected and tested for total dissolved solids.

DISCHARGE TO DESIGNATED DISPOSAL AREA MONITORING

The following monitoring is required for any month in which wastewater is discharged from the pond(s) to a dedicated disposal area. If no discharge took place during that month, then the monitoring report shall so state. Wastewater samples shall be collected after the junction box that allows mixing with the irrigation water from Lake Bordeaux, and prior to discharge to the designated disposal area

(DDA-1 or DDA-2). Samples shall be representative of the mixture of wastewater and irrigation water. Flow monitoring shall take place as described below. Effluent monitoring shall include at a minimum the following:

Constituent	Units	Type of Sample	Sampling Frequency[1]	Reporting Frequency[1]
Flow from Pond	Gallons	Metered	Continuous[2]	Monthly
Flow of irrigation water	Gallons	Metered	Continuous[2]	Monthly
Total flow to DDA	Gallons	Calculated[3]	Continuous[2]	Monthly
Dilution rate	calculated	calculated	Daily	Monthly
pH	pH units	Grab	Weekly	Monthly
Specific Conductivity	µmhos/cm	Grab	Monthly	Monthly
BOD_5[1]	mg/L	Grab	Monthly	Monthly
Nitrates as Nitrogen	mg/L	Grab	Monthly	Monthly
Total Kjeldahl Nitrogen	mg/L	Grab	Monthly	Monthly
Total Dissolved Solids	mg/L	Grab	Monthly	Monthly
Sulfate	mg/L	Grab	Monthly	Monthly

[1] Samples only need be collected during the irrigation season. If irrigation does not occur during a reporting period, the monitoring report shall so state.
[2]Continuous monitoring requires daily meter reading or automated data collection.
[3] Sum of flow from pond plus flow of irrigation water

DESIGNATED DISPOSAL AREA MONITORING

A. Daily Pre-Application Inspections

The Discharger shall inspect the land application areas at least **once daily** prior to and during irrigation events, 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 and the above monitoring is not necessary. The following items shall be documented for each check or field to be irrigated on that day:

a. Evidence of erosion;
b. Containment berm condition;
c. Condition of each standpipe and flow control valve (if applicable);
d. Proper use of valves;
e. Soil saturation;
f. Ponding;
g. Tailwater ditches and potential runoff to off-site areas;
h. Potential and actual discharge to surface waters;
i. Odors that have the potential to be objectionable at or beyond the property boundary; and
j. Insects.

Temperature, wind direction and relative strength, and other relevant field conditions shall also be observed and recorded. The notations shall also document any corrective actions taken based on observations made. A copy of entries made in the log during each month shall be submitted as part of the Monthly Monitoring Report.

B. Routine Monitoring

Monitoring shall be conducted daily during the period in which wastewater is discharged to the designated disposal areas. If no discharge takes place during a particular month then the monthly monitoring report shall so state and the following monitoring is not required. The Discharger shall perform the following routine monitoring and loading calculations, and shall present the data in the Monthly and Annual Monitoring Reports.

Constituent	Units	Type of Sample	Sampling Frequency[1]	Reporting Frequency[1]
Local Rainfall	inches	Measurement	Daily	Monthly
Acreage Applied[2]	acres	Calculated	Daily	Monthly
Application Rate	gal/acre/day	Calculated	Daily	Monthly
Total Nitrogen Loading Rate[3]	lbs/acre/month[4]	Calculated	Monthly	Monthly
Total Dissolved Solids Loading Rate	lbs/acre/month[4]	Calculated	Monthly	Monthly
BOD_5 Loading Rate	lbs/acre/day[5]	Calculated	Monthly	Monthly

[1]Monitoring is only necessary during the irrigation season. If irrigation does not occur during a reporting period, the monitoring report shall so state.
[2]Designated Disposal Area(s) in use shall be identified by name or number and the acreage provided. If a portion of an area is used, then the acreage shall be estimated.
[3]Total nitrogen applied from all sources, including fertilizers and supplemental irrigation water if used.
[4]Report monthly total and cumulative annual to date.
[5]Report 7-day average and maximum daily loading.

SOLIDS MONITORING

The Discharger shall record and report monthly the quantity, disposal location, and method of disposal of solids disposed of during the processing season, as well as during the off-season, if applicable. If solid waste is shipped offsite, then a description of the quantity of each type of waste shipped offsite and the location of the disposal area(s) shall be included with the report.

GROUNDWATER MONITORING

This monitoring program applies to the existing seven wells shown on Attachment C of the WDRs and the future wells installed at DDA-2. Prior to construction and/or sampling of any groundwater monitoring wells, the Discharger shall submit plans and specifications to the Board for review and

approval. Once installed, all new wells shall be added to the MRP and shall be sampled and analyzed according to the schedule below.
Prior to sampling, the groundwater elevations shall be measured and the wells shall be purged of at least three well volumes or until temperature, pH, and electrical conductivity have stabilized. Depth to groundwater shall be measured to the nearest 0.01 feet. Samples shall be collected and analyzed using standard EPA methods or the latest edition of *Standard Methods*. Groundwater monitoring shall include, at a minimum, the following:

Constituent	Units	Type of Sample	Sampling and Reporting Frequency
Depth to Groundwater	0.01 feet	Measurement	Quarterly
Groundwater Elevation[1]	0.01 feet	Calculated	Quarterly
Gradient	feet/feet	Calculated	Quarterly
Gradient Direction	degrees	Calculated	Quarterly
pH	std.	Grab	Quarterly
Nitrate as Nitrogen	mg/L	Grab	Quarterly
Total Kjeldahl Nitrogen	mg/L	Grab	Quarterly
Total Dissolved Solids	mg/L	Grab	Quarterly
Volatile Dissolved Solids	mg/L	Grab	Quarterly
Sulfate	mg/L	Grab	Quarterly
Standard Minerals[2]	mg/L	Grab	Annually

[1]Groundwater elevation shall be determined based on depth-to-water measurements from a surveyed measuring point elevation on the well.
[2]Standard Minerals shall include the following: boron, calcium, iron, magnesium, potassium, sodium, chloride, manganese, phosphours, 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., effluent, 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 Engineer or Professional Geologist and signed/stamped by the registered professional.

A. Monthly Monitoring Reports

Monthly reports shall be submitted to the Regional Board on the **1st day of the second month following sampling** (i.e. the January Report is due by 1 March). At a minimum, the reports shall include:

1. Results of the Bioreactor influent, Bioreactor effluent, pond, discharge to designated disposal area, designated disposal area, and solids disposal monitoring. Data shall be presented in tabular format;

2. If wastewater was applied to a designated disposal area during the month, then daily pre-irrigation inspection reports;

3. A comparison of monitoring data to the discharge specifications and an explanation of any violation of those requirements;

4. If requested by staff, copies of laboratory analytical report(s);

5. A calibration log verifying calibration of all hand held monitoring instruments and devices used to comply with the prescribed monitoring program;

6. The total pounds of total dissolved solids (year to date) that have been applied to the designated disposal area(s), as calculated from the sum of the monthly loadings;
7. The total pounds of nitrogen in fertilizer applied to the designated disposal area(s) application area for the month; and
8. The total wastewater flow (year to date).

B. Quarterly Report

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 Board by the **1st day of the second month after the quarter** (i.e. the January-March quarterly report is due by May 1st) and may be combined with the monthly report. The Quarterly Report shall include the following:

1. Results of the 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 and discussion of seasonal trends if any;

4. A narrative discussion of the analytical results for all groundwater locations monitored including spatial and temporal tends, with reference to summary data tables, graphs, and appended analytical reports (as applicable);

5. A comparison of the 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

An Annual Report shall be prepared as the December monthly monitoring report. The Annual Report will include all monitoring data required in the monthly and quarterly schedule. The Annual Report shall be submitted to the Regional Board by **1 February** each year. In addition to the data normally presented, the Annual Report shall include the following:

1. The contents of the regular monthly and quarterly monitoring report for the last month and quarter of the year, respectively;

2. If requested by staff, tabular and graphical summaries of all data collected during the year;

3. Results of the annual effluent and groundwater monitoring;

4. Results of the annual vault inspection, and if any repair work was undertaken, a description of the work;

5. Tabular and graphical summaries of historical monthly total loading rates for water (hydraulic loading in gallons and inches), BOD, total nitrogen, and total dissolved solids;

6. The total wastewater flow for the year;

7. 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 (i.e.: waste constituent and hydraulic loadings, application cycles, drying times, and cropping practices), soil profile monitoring data and groundwater monitoring data;

8. A summary of the quantity of solid waste (lees, stems, pomace, etc.) generated and disposed of both on and off the site;

9. An evaluation of the groundwater quality beneath the ponds and the designated disposal area(s);

10. Estimated flows for the next calendar year;

11. 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; and

12. 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

_____
(Date)

GJC/WSW:20-Apr-06