

APPENDIX C– MONITORING AND REPORTING PROGRAM No. R1-2016-0002

Dischargers regulated under the General WDRs for Discharges of Wine, Beverage, and Food Processor Waste to Land, Order No. R1-2016-0002 (Order) shall be subject to the following monitoring and reporting requirements, unless such requirements are modified by the Executive Officer. California Water Code section 13267 authorizes the Regional Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement California regulations. Any person failing to furnish technical or monitoring reports or falsifying any information therein is guilty of a misdemeanor, and may be subject to civil liability. (Wat. Code, § 13268.)

I. GENERAL MONITORING PROVISIONS

- A. If the Discharger monitors any pollutant more frequently than required by this Order, using test procedures as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the semiannual self-monitoring reports.
- B. Laboratories analyzing monitoring samples shall be certified by the California Environmental Laboratory Accreditation Program (ELAP), in accordance with Water Code section 13176, and must include quality assurance/quality control data with their reports.
- C. Compliance monitoring analyses shall be conducted using commercially available and reasonably achievable detection limits that are lower than the applicable effluent limitation. If no minimum level (ML) value is below the effluent limitation, the lowest ML shall be selected as the reporting level (RL).

II. PROCESS AND PRODUCTION VOLUME

A. Monitoring

The processing season, processing volume and production volume of the facility shall be recorded as listed below.

<u>Parameter</u>	<u>Units</u>
Processing Season	Start & End Dates (If processing takes place year round, report as "All Year")
Processing Volume	Tons/Year; Pounds/Year; or Gallons/Year (Use Units most appropriate for Type of Facility)
Production Volume	Cases/Year; Barrels/Year; Gallons/Year; Tons/Year; or Pounds/Year (Use Units most appropriate for Type of Facility)

B. Reporting

The annual process and production volume measurements shall be included in the second semiannual monitoring report. The due dates for the semiannual monitoring reports are listed in Section X.A of this MRP.

III. CHEMICAL USAGE

A. Monitoring

An estimate of the volume(s) and type(s) of chemical(s) used at the facility that could be either included in the process wastewater being treated and/or the process waste solids being reused on lands as a soil amendment.

B. Reporting

Annual chemical usage estimates shall be included in the second semiannual monitoring report. The due dates for the semiannual monitoring reports are listed in Section X.A of this MRP.

IV. SEPTIC TANK(S) AND DISPOSAL LEACH FIELD(S)**A. Septic Tank Monitoring**

Sludge and scum accumulation in all septic tanks shall be inspected and measured annually for the following parameters listed below. An inspection is not required during the year the septic tank is pumped.

<u>Parameter</u>	<u>Units</u>	<u>Measurement</u>	<u>Frequency</u>
Date of Inspection.	Date	-----	Annually
Sludge depth and scum thickness in each compartment of each septic tank.	Feet	Staff Gauge	Annually
Distance between bottom of scum layer and bottom of outlet device.	Inches	Staff Gauge	Annually
Distance between top of sludge layer and bottom of outlet device.	Inches	Staff Gauge	Annually

B. Septic Tank Maintenance

The septic tank(s) shall be pumped when any of the following conditions exist.

<u>Parameter</u>	<u>Condition</u>
Combined sludge and scum thickness	Exceeds one third (1/3) of the tank depth of the 1 st compartment
Bottom of floating scum layer	Within 3 inches of the outlet device
Top of sludge layer	Within 8 inches of the outlet device

C. Disposal Field Monitoring

The disposal leach fields(s) shall be monitored for the parameters listed below.

<u>Parameter</u>	<u>Units</u>	<u>Sample Type</u>	<u>Sampling Frequency</u>
Average Daily Flow	Gallons/Day (gpd)	Metered, Recorded Pumping Hours or Estimated based on water usage ¹	Monthly ²
Field condition	Dry or Saturated	Visual ³	Monthly
<u>Table Notes:</u>			
1. Water usage for processing activities only. Explanation of how this estimate was calculated must be included with the reported value.			
2. As measured during the first seven days of the month.			
3. Pounded wastewater on surface of leach field or wetness of ground surface.			

D. Disposal Field Maintenance

Systems designed with multiple disposal leach fields shall be alternated on a specified schedule, no less than semiannually, to prevent clogging and surfacing effluent.

E. Septic Tank and Disposal Field Reporting

Septic tank and disposal leach field monitoring measurements shall be included in the semiannual monitoring report that reports on the time period when the measurement was taken. The due dates for the semiannual monitoring reports are listed in Section X.A of this MRP.

V. OTHER TREATMENT SYSTEMS (NON SEPTIC TANK LEACH FIELD SYSTEMS)

A. Treatment Pond System Monitoring

The Discharger shall monitor the following parameters of the process wastewater pond treatment system.

<u>Parameter</u>	<u>Units</u>	<u>Sample Type</u>	<u>Sampling Frequency</u>
Average Daily Flow to Pond System	Gallons/Day (gpd)	Metered, Recorded Pumping Hours or Estimated based on water usage ¹	Monthly ²
Freeboard of each pond	Feet	Measured	Monthly
Dissolved Oxygen	mg/l	Grab	Monthly
Odors	----	Observation	Monthly
Berm Condition	----	Observation	Monthly
Depth of Settled Solids in pond	Feet	Measured	5 years
<u>Table Notes:</u>			
1. Water usage for processing activities only. Explanation of how this estimate was calculated must be included with the reported value.			
2. As measured during the first seven days of the month.			

B. Non-pond Treatment System Monitoring

The Discharger shall monitor the following parameters of the process wastewater treatment system.

<u>Parameter</u>	<u>Units</u>	<u>Sample Type</u>	<u>Sampling Frequency</u>
Average Daily Flow to Treatment System	Gallons/Day (gpd)	Metered, Recorded Pumping Hours or Estimated based on water usage ¹	Monthly ²
Odors	----	Observation	Monthly
Operation & Maintenance Activities	----	Reported	Monthly
Freeboard of each basin ³	Feet	Measured	Monthly
<u>Table Notes:</u>			
1. Water usage for processing activities only. Explanation of how this estimate was calculated must be included with the reported value.			
2. As measured during the first seven days of the month.			
3. Applies to spreading basins only.			

C. Effluent Monitoring Other Treatment Systems

The Discharger shall monitor the following parameters of the treated process wastewater prior to reuse as crop or landscape irrigation water.

<u>Parameter</u>	<u>Units</u>	<u>Sample Type</u>	<u>Sampling Frequency</u>
Biochemical Oxygen Demand (BOD)	mg/l	Grab	Monthly ¹
BOD loading	pounds/acre/day	Calculated	Monthly ¹
Dissolved Oxygen	mg/l	Grab	Monthly ¹
pH	pH Units	Grab	Monthly ¹
Total Dissolved Solids	mg/l	Grab	Monthly ¹
Ammonia (as N)	mg/l	Grab	Monthly ¹
Nitrite (as N)	mg/l	Grab	Monthly ¹
Nitrate (as N)	mg/l	Grab	Monthly ¹
Chloride ²	mg/l	Grab	Monthly ¹
Sodium ²	mg/l	Grab	Monthly ¹
Fats, Oil & Grease ²	mg/l	Grab	Monthly ¹
<u>Table Notes:</u>			
1. When irrigation, re-use, or other type of land disposal is anticipated.			
2. Applies only to those processing facilities identified in the Notice of Coverage letter as being required to monitor for these constituents.			

D. Effluent Load Monitoring

The discharge of treated effluent to land for the purpose of reuse as irrigation water or disposal, and the discharge of process wastewater to an at-grade land treatment system such as to a spreading basin or overland flow treatment system, shall be monitored for the parameters listed below.

<u>Parameter</u>	<u>Units</u>	<u>Sample Type</u>	<u>Sampling Frequency</u>
Land application area	Acres	N/A	Monthly ¹
Volume of effluent applied to land	Millions of gallons	Metered or Recorded pumping hours	Monthly ¹
Mass of BOD applied to land (including spreading basins)	Pounds/acre/day	Calculated	Monthly ¹
Wetting cycle duration ²	Hours	Measured	Continuous ¹
Wetting cycle volume ²	Gallons/acre/cycle	Measured	Continuous ¹
<u>Table Notes:</u>			
1. When irrigation, re-use, or other type of land disposal is anticipated.			
2. Applies to spreading basins only.			

E. Other Designed Treatment System Reporting

Other designed treatment system monitoring measurements shall be included in the semiannual monitoring report that reports on the time period when the measurement was taken. The due dates for the semiannual monitoring reports are listed in Section X.A of this MRP.

VI. GROUNDWATER

A. Groundwater Monitoring

Facilities discharging process wastewater to an at-grade spreading basin or below ground to a disposal field, for wastewater treatment, are required to monitor groundwater for the purpose of assessing compliance with the conditions of the Order. Additionally, Regional Water Board staff may require in the Notice of Coverage (NOC) letter that any other Discharger monitor groundwater if deemed necessary to verify compliance with the Order. The Discharger shall monitor groundwater as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency
Depth to Groundwater	0.1 feet	Measurement	Quarterly
Groundwater Elevation	0.01 feet MSL	Measurement	Quarterly
pH	std units	Grab	Quarterly
Nitrate (as N)	mg/L	Grab	Quarterly
Total Dissolved Solids	mg/L	Grab	Quarterly
Chloride	mg/L	Grab	Quarterly
Sodium	mg/L	Grab	Quarterly

B. Groundwater Reporting

Groundwater monitoring measurements shall be included in the semiannual monitoring report covering the time period when the measurement was taken. The due dates for the semiannual monitoring reports can be found in Section X.A of this MRP.

C. Monitoring Well Construction

A minimum of three monitoring wells (one up-gradient and two down-gradient) shall be constructed as described in the design plans submitted with the Technical Information Form (TIF). Within 60 days after completion of construction of the monitoring wells, the Discharger shall submit a report that includes but is not limited to relevant subsurface stratigraphy and lithology; a diagram of each well showing total drilled depth, well installation depth, and construction details including screened interval and top of casing elevation; and location map of all installed wells.

D. Monitoring Well Locations

Within one year of the issuance of the NOC letter, the Discharger shall install monitoring wells and begin groundwater monitoring at appropriate locations and depths to yield groundwater samples to assess whether changes in groundwater quality are occurring as a result of the discharge to the disposal field. Samples shall be collected from the installed wells for the constituents as specified in Section VI.A.

VII. LAND APPLICATION AREA

A. Land Application Monitoring

The Discharger shall inspect the land application area(s) at least once daily during each irrigation event with treated process wastewater effluent and each reuse event of process solid waste as a soil amendment. Evidence of erosion, field saturation, runoff, or the presence of nuisance conditions (e.g., flies, odors, etc.) shall be noted in a field log. The field log should include the time and date of the inspection and the name of the individual performing the inspection.

The Discharger shall retain precipitation records, for times of wet weather when land application occurred. The precipitation records should include, but not be limited to;

1. A printed copy of a precipitation event¹ forecast from the National Weather Service Forecast Office (i.e., by entering the zip code of the land application area at <http://www.srh.noaa.gov/forecast>);
2. The time, date, and rain gauge reading of the precipitation event;
3. The date, time, and location of visual observations;
4. The individual(s) who performed the visual observation.

B. Land Application Area Reporting

Land application area inspections shall be included in the semiannual monitoring report covering the time period when the inspection took place. The due dates for the semiannual monitoring reports can be found in Section X.A of this MRP.

VIII. FACILITY-SPECIFIC NUTRIENT MANAGEMENT PLAN

A. Content

A Facility-specific Nutrient Management Plan (FNMP) is required for those facilities that either; 1.) Apply treated process wastewater to land at concentrations exceeding effluent limits for ammonia, nitrate or nitrite or 2.) Apply solid non-hazardous, decomposable processor waste to land as a source of nutrients and a soil amendment. The FNMP shall include the components described in Appendix D of this Order.

B. Revisions

Changes or updates to the original FNMP, approved by Regional Water Board staff in the Notice of Coverage (NOC) letter, shall be submitted to the Regional Water Board for approval prior to making the change or update.

C. Groundwater Monitoring

Facilities producing greater than 10,000 gpd of process wastewater, as averaged over a calendar month, that land apply treated process wastewater for the purpose of reuse or disposal, and apply nutrients above the treated process wastewater effluent limits, at agronomic rates, in accordance with an approved facility specific nutrient management plan (FNMP), are required to monitor groundwater for the purpose of assessing compliance with conditions of the Order. Within one year of the issuance of the NOC letter, the Discharger shall install monitoring wells and begin groundwater monitoring at appropriate locations and depths to yield groundwater samples to assess whether changes in groundwater quality are occurring as a result of the discharge.

The Discharger shall monitor groundwater as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency
Depth to Groundwater	0.01 feet	Measurement	Quarterly
Groundwater Elevation	0.01 feet MSL	Measurement	Quarterly
Nitrate (as N)	mg/L	Grab	Quarterly
Total Dissolved Solids	mg/L	Grab	Quarterly

¹ The National Oceanic and Atmospheric Administration (NOAA) defines a chance of precipitation as a probability of precipitation of 30% to 50% chance of producing precipitation in the project area. Precipitation is water that falls to the ground as rain, snow, etc. at a measurable amount of 0.01 inch or more.

Alternatively, ground water monitoring requirements may be met by participation in a regional monitoring program approved by the Regional Water Board. Those facilities participating in an approved regional monitoring program shall install monitoring wells and begin groundwater monitoring within two years of WBFPP WDRs adoption date.

IX. SOLIDS MONITORING REQUIREMENTS

A. Solids Monitoring

The Discharger shall monitor the following parameters of process solid waste generated during wine, beverage or food processing activities:

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

B. Solids Monitoring Reporting

Solids monitoring measurements shall be included in the semiannual monitoring report covering the time period when the measurement was taken. The due dates for the semiannual monitoring reports can be found in Section X.A of this MRP.

X. REPORTING REQUIREMENTS

A. Monitoring Periods and Reporting Schedule

All monitoring results shall be reported in the semiannual monitoring reports which are to be received by the Regional Water Board by the first day of the second month after the six-month reporting period. Therefore, monitoring reports are due as follows:

<u>Report Title</u>	<u>Reporting Period</u>	<u>Due Date</u>
1 st Semiannual Report	January 1 through June 30	August 1
2 nd Semiannual Report	July 1 through December 31	February 1, following year

B. Annual Summary

The second semiannual monitoring report shall include a discussion, or annual summary, of how the treatment and disposal system functioned the previous year. The summary should discuss compliance (or non-compliance) with effluent limits and other Order requirements and the corrective actions taken or planned to bring the discharge into full compliance with the Order.

C. Electronic Reporting

The semiannual monitoring reports shall be submitted to the Regional Water Board via e-mail to NorthCoast@waterboards.ca.gov or on disk (CD or DVD) in a Portable Document Format (PDF) file in lieu of paper-sourced documents. The guidelines for electronic submittal of documents can be found on the Regional Water Board website at <http://www.waterboards.ca.gov/northcoast>.

D. Transmittal Letter

A transmittal letter, identifying the Facility name, address and WDID number 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 the violations, such as operation or system modifications. If the Discharger previously submitted to the Regional Water Board a report describing the corrective action or time schedule for implementing the corrective actions, reference to the previous report is satisfactory.

E. Report Format

The Discharger shall arrange the monitoring results in tabular form so that the date, the constituents, and the concentrations are readily discernible. The results shall be summarized in such a manner as to illustrate clearly whether the discharge complies with the Order. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurement(s);
2. The individual(s) who performed the sampling or measurement(s);
3. The date(s) analysis were performed;
4. The individual(s) who performed the analysis;
5. The analytical techniques or method used;
6. The results of such analysis; and
7. The complete laboratory data sheets for each analysis.

F. Signature and Submittal

The semiannual monitoring reports shall be signed by a duly authorized representative, as specified in General Provision 10, of the Order. The person signing the semiannual report shall make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

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