



*Giumarra*  
VINEYARDS

June 15, 2015

Dale Harvey  
California Regional Water Quality Control Board  
1685 E Street  
Fresno, CA 93706

**RE: Tentative WDR/MRP Comments**

Dear Mr. Harvey:

Thank you for the opportunity to review and provide additional comments on the Tentative Waste Discharge Requirements and Tentative Monitoring and Reporting Program for the Giumarra Vineyards.

We have identified three major comments and clarifications with supporting rationale. Please refer to the attached comment letter from NV5 for explanation of the three major comments and rationale.

If you have any questions, please do not hesitate to contact Patrick Dunn at 916-641-9207 or Crystal Macias at 661-395-7083.

Sincerely,

**GIUMARRA VINEYARDS**

John Giumarra  
President

Crystal Macias  
Operations Manager  
PFD/

June 11, 2015

Via Email

Mr. Jeff Giumarra and Ms. Crystal Macias  
 Giumarra Vineyards  
 11220 Edison Highway  
 Bakersfield, CA 93307

**Re: Response to Tentative WDRs and MRP - Review and Comments for the Giumarra Vineyards Corporation**

Dear Mr. Giumarra and Ms. Macias:

NV5 appreciates the opportunity to provide additional review and comments regarding the 2015 Tentative Waste Discharge Requirements (TWDRs) and Monitoring and Reporting Program (TMRP) for the Giumarra Vineyards Corporation (Giumarra or Facility). As part of this comment effort, NV5 reviewed the following: TWDRs, TMRP, glossary, information sheet and associated attachments, and October 2014 ROWD (NV5). This letter references the comment letter for the Administrative Draft WDR and MRP review, submitted to the Regional Board on May 7, 2015 (ADWDR Letter).

NV5 has developed the following 3 major comments and clarifications with supporting rationale in addition to the previous submitted comment letter:

- 1) Discharge volume and cycle average BOD loading rate restriction – Recommend an initial average flow limitation of 192,000 gpd (and reducing flow if deemed necessary) and a 3 day application cycle:

*Restricting plant flow to less than half of the proposed flow is onerous and would inhibit the Facility's ability to operate normally. The planned Wastewater and Nutrient Management Plan (WNMP) and other reports to be completed would fully assess the implementation of the best practices as well as LAA field assessment, detailing loading rates and compliance with the WDR. If the assessment determines that the plant has not been in compliance with the limitations, then the Facility will investigate ways to engineer wastewater quality improvements (including pond aeration treatment), expand the LAA and/or engineer wastewater flow reduction measures to the lower flow of 79,900 gpd.*

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The WNMP document will utilize the ROWD proposed average flow of 192,000 gpd for nutrient loading calculations and land application area requirements specific to BOD loading. Calculations provided in the plan will demonstrate the Facility's ability to utilize the LAA (80 acre or expanded) and wastewater flows in a manner that will meet WDR requirements for nutrient loading rates (Effluent and Mass Limitations B.1 and B.2). If WNMP assessment determines loading rates are in excess of the WDR provisions, engineering alternatives may be implemented to facilitate the lowering of BOD concentrations which may include the use of chemicals and/or aeration techniques. The WNMP will include recommendations for crop rotations, irrigation methods and practices, and rest periods between wastewater applications to the LAA. The TWDRs limit organic loading to "100 lbs/acre/day over an appropriate discharge cycle when wastewater is applied via flood irrigation and up to 150 lbs/acre/day over an appropriate discharge cycle when wastewater is applied via sprinkler irrigation". If a three day application cycle (i.e., one day of application plus two days of drying) is determined to be acceptable in the WNMP, the typical cycle average BOD loading rate would be 104 lbs/acre/day to the 80-acre LAA (assuming an effluent BOD concentration of 1,735 mg/L and a monthly average flow of 192,000 gpd):

$$\text{Cycle Avg BOD Loading} = \frac{3 \times \frac{0.192 \text{ MG}}{\text{day}} \times \frac{1,735 \text{ mg}}{\text{L}} \times \frac{8.34 \text{ lbs}}{\text{MG-mg/L}}}{80 \text{ acres}} = 104 \text{ lbs/acre/day}$$

Only 5 additional acres would be required (for a total LAA of 85 acres) to lower the cycle average BOD loading rate to less than 100 lbs/acre/day for flood irrigation with a three day application cycle. With the addition of 46 acres of farmland (as referenced in TWDRs as potential land available to expand the LAA) for a total LAA of 126 acres, the typical cycle average BOD loading rate would be 66 lbs/acre/day.

- 2) Groundwater Monitoring Well Phased Work Plan Schedule increase to reflect the completion of the operational changes which may exceed two growing seasons.

As referenced in the ADWDR Letter, submitted May 7, 2015 by NV5, the change is recommended to allow for the preparation and implementation of the Salinity Management Plan, Wastewater and Nutrient Management Plan prior to the adoption of a groundwater monitoring network comprised of an existing well network (preferred) or

*installation of groundwater monitoring wells. A schedule of up to three (3) years should be considered to complete the referenced Salinity and WNMP plans, submit a Ground Water Beneficial Use Study and Existing Conditions Irrigation/Domestic Well Assessment effort and design a monitoring well network. Recommended language for the schedule change and addition of this Assessment Report was provided in the ADWDR letter. This report will provide details on the local hydrogeologic conditions (water levels) and local groundwater quality observations from selected irrigation and domestic wells surrounding the Facility and LAA. A monitoring network may be proposed to the Regional Board from already existing monitoring locations, irrigation wells or domestic wells to be sampled per the MRP schedule and reporting. If suitable existing wells cannot be identified for a monitoring network, then monitoring well locations for a monitoring well network will be proposed. The new WNMP also includes additional acres for irrigation; so the phased approach work plan to future installations would maximize the success of appropriate location.*

3) Reduction to bi-monthly (twice/month) sampling of Effluent (MRP1) based on historic data collection

*Water quality data from the effluent sample location (MRP 1 Effluent Monitoring) was available from 2006 through 2015 for various parameters, but from July 2013 through April 2015 for a more extensive parameter list. Samples were collected generally once or twice per month as both grab and composite samples from the effluent location. The following discussion focuses on parameters BOD, TDS, FDS and total Nitrogen, as these parameters will have the most limiting factor to land application of wastewater per the WNMP.*

*During the time period from 2006 through April 2015, BOD ranged from non-detect to 25,000 mg/L, TDS ranged from 560 to 19,000 mg/L, FDS ranged from 190 to 1,600 mg/L and total nitrogen ranged from 0.95 to 500 mg/L. Average concentrations were reported as 1,811 mg/L for BOD, 1,874 mg/L for TDS, 881 mg/L for FDS and 19.0 mg/L for total nitrogen.*

*For BOD, 139 samples were collected from January 2006 through April 2015. Of the collected samples, only eight detections were reported above 4,000 mg/L, with the majority of samples reported around the average concentration. Some variation in*

*concentrations has been observed historically, but with less than 6% of the samples reported over 4,000 mg/L, BOD concentrations have been generally stable around the average concentration.*

*For TDS, 62 samples were collected from July 2013 to April 2015. Of the collected samples, only four detections were reported above 4,000 mg/L, with the majority of samples reported around the average concentration. Three of the four most elevated detections were reported in grab samples. TDS concentrations have shown variability between grab and composite samples, but have generally been stable around the average concentration.*

*For FDS, 30 samples were collected from July 2013 to April 2015. The samples collected are generally evenly distributed around the average concentration with no highly elevated concentrations reported. FDS has been fairly stable for the sampling period.*

*For Total nitrogen, 124 samples were collected from January 2006 through April 2015. Of these samples, eight were reported above 50 mg/L, with only two samples reported above 100 mg/L. Samples were generally reported around the average concentration and have been generally stable, with a little over 6% of total samples collected reported as very elevated compared to the average concentration.*

*The graphs and data show that while some breakthrough concentrations have been reported in the effluent samples, the concentrations are generally stable around their respective averages. With the history of data available and generally stable data trends, weekly sampling should not be required as an extensive general history exists for effluent water quality. Instead, a bi-monthly (every two week) sampling frequency would be appropriate to capture monitoring data. If data displays continued stability after one year of monitoring at the bi-monthly (every two week) frequency, the Discharger may elect to request a sampling frequency reduction to monthly or every other month for Executive Officer approval.*

We appreciate the opportunity to serve your environmental needs and look forward to working with you. Please contact me at (916) 641-9207 if you have questions or require clarifications.

Mr. Jeff Giumarra and Ms. Crystal Macias  
June 11, 2015  
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Patrick F. Dunn, M.S., P.G., C.Hg.  
Group Director