

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2012-xxxx

AMENDING WASTE DISCHARGE REQUIREMENTS ORDER R5-2006-0037
FOR
GUENOC WINERY, INC.
GUENOC WINERY
LAKE COUNTY

The California Regional Water Quality Control Board, Central Valley Region (hereafter Central Valley Water Board), finds:

2006 WASTE DISCHARGE REQUIREMENTS

1. On 5 May 2006, the Central Valley Water Board adopted Waste Discharge Requirements (WDRs) Order R5-2006-0037, prescribing requirements for Guenoc Winery in Lake County. Guenoc Winery, Inc. (hereafter Discharger) owns and operates the winery.
2. Winery process wastewater is screened, treated in a bioreactor, clarified, and discharged to a Class II surface impoundment. Wastewater is removed from the impoundment, blended with fresh water, and used to irrigate a 54-acre pasture (DDA-2). The Class II surface impoundment is regulated under WDRs Order R5-2007-0026. The treatment and land disposal systems are regulated under WDRs Order R5-2006-0037.
3. Prior to construction of the bioreactor and the Class II surface impoundment, minimal treatment was provided, and the wastewater was discharged to a series of five unlined treatment and storage ponds before land application. Due to the extreme salinity and organic content of the waste, the discharge caused significant groundwater degradation.
4. The waste was categorized as a designated waste in accordance with California Water Code section 13173. The Discharger agreed to provide further treatment and a Class II surface impoundment for effluent storage to prevent further pollution.

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5. The Discharger could not comply with the groundwater limitations of the previous WDRs until the proposed improvements were completed. Therefore, Order R5-2006-0037 was adopted with a companion Cease and Desist Order (CDO R5-2006-0038) to provide a time schedule to complete the Class II surface impoundment and other compliance projects.

6. The Effluent Limitations of Order R5-2006-0037 state:

“Wastewater discharged to Pond A (or the existing wastewater ponds prior to construction of Pond A) and to DDA-2 shall not exceed the following monthly average effluent limits, or any lower limits necessary to comply with the Groundwater Limitations:

<u>Constituent</u>	<u>Units</u>	<u>Discharge to Pond A</u>	<u>Discharge to DDA-2 ¹</u>
Biochemical Oxygen Demand	mg/L	180	90
Total Dissolved Solids	mg/L	900	450
Total Suspended Solids	mg/L	60	50
Total Kjeldahl nitrogen	mg/L	10	5
pH	mg/L	6.8 - 7.2	6.8 - 7.2
Chloride	mg/L	18	2.6

¹ *Measured as the blended wastewater and supplemental irrigation water.”*

Pond A is the Class II surface impoundment and DDA-2 is the pasture, which receives a blend of treated effluent and fresh water.

2008 WASTE DISCHARGE REQUIREMENTS AMENDMENT

7. On 9 May 2008, the Discharger requested that the WDRs be amended to increase the salinity limits for treated effluent that is now discharged to the Class II surface

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impoundment, and to relax the pH limits for wastewater discharged to the surface impoundment and the land application area.

8. On 15 August 2008, the Discharger's consultant submitted additional information regarding the chloride effluent limit for blended wastewater discharged to DDA-2. The information indicates that the 2.6 mg/L chloride limit was calculated incorrectly, and that the limit was intended to be 9 mg/L. The Discharger can achieve 9 mg/L, but cannot comply with the 2.6 mg/L limit.
9. On 11 September 2008, the Central Valley Water Board adopted Resolution R5-2008 0147, which amended the Effluent Limitations of the 2006 WDRs Order R5-2006-0037. Resolution R5-2008-0147 amended the effluent limits as follows:

"The discharges to Pond A and DDA-2 shall not exceed the following monthly average effluent limits:

<u>Constituent</u>	<u>Units</u>	<u>Discharge to Pond A</u>	<u>Discharge to DDA-2 ¹</u>
Biochemical Oxygen Demand	mg/L	180	90
Total Dissolved Solids	mg/L		450
Total Suspended Solids	mg/L	60	50
Total Kjeldahl Nitrogen	mg/L	10	5
pH	pH units		6.8 - 9.5
Chloride	mg/L		9

¹ *Applies to the blend of wastewater and supplemental irrigation water."*

10. In adopting Resolution R5-2008-0147, the Central Valley Water Board found that, with regard to the treated effluent discharged from the bioreactor to Pond A:
- a. Because Pond A is a Class II surface impoundment with a double liner and leachate collection and recovery system, there is no need to impose pH limits on the discharge from the treatment system to the pond. Adjustment of pH would

require addition of more salt, which is contrary to the intent of the WDRs and the CDO.

- b. The pond lining system prevents release of salinity constituents and the Discharger uses supplemental irrigation water to control the salinity of waste that is discharged to DDA-2. Therefore, the effluent limits for dissolved solids and chloride in the effluent discharged into Pond A are not necessary to protect water quality.
- c. Effluent limits for biochemical oxygen demand, suspended solids, and nitrogen in the effluent discharged into Pond A are appropriate to compel optimal operation of the wastewater treatment system.

11. With regard to the discharge of treated wastewater from Pond A to DDA-2, the Central Valley Water Board also found that:

- a. Most soils have excellent buffering capacity, so there is no reason to impose stringent pH limits on the discharge to DDA-2. Information in the WDRs indicates that there is at least 5 to 10 feet of clay and silty clay soil underlying DDA-2, so a pH range of 6.0 to 9.5 should adequately protect groundwater quality.
- b. The original effluent limits for biochemical oxygen demand, dissolved solids, suspended solids, and nitrogen in the blended wastewater discharged to DDA-2 are appropriate to protect groundwater quality.
- c. The statistically-determined background groundwater concentration for chloride is 18.2 mg/L. As stated in Finding Nos. 26 and 30 of Order R5-2006-0037, the projected chloride concentration of 7 to 9 mg/L in the blended wastewater should not cause groundwater degradation. Therefore, it is reasonable to increase the effluent limit for chloride in the blended wastewater to 9 mg/L.

PROPOSED AMENDMENT

12. The Discharger is unable to meet the total suspended solids (TSS) and total Kjeldahl nitrogen (TKN) effluent requirements. On 23 September 2011, the Discharger requested that these limitations be removed. In lieu of a TKN limit, the Discharger proposed a nitrate (as nitrogen) effluent limit and an annual total nitrogen loading rate limit for DDA-2.
13. Effluent limits for BOD, TSS, and TKN in the effluent discharged into Pond A are not necessary because of the following:
 - a. Pond A has a Title 27 liner system, which is protective of groundwater, and includes a leachate collection and removal system and pan lysimeter to detect a potential release from the pond.
 - b. A minimum four feet of water is maintained in Pond A to allow the aerator to operate year-round, which provides dilution and additional treatment. Supplemental irrigation water is added whenever water level drops below four feet.
14. With regard to effluent discharged from Pond A to DDA-2:
 - a. A TSS limit does not directly ensure the quality of water applied onto DDA-2. Therefore, a TSS effluent limit for the discharge of treated wastewater from Pond A to DDA-2 is not necessary.
 - b. A TKN limit does not control all of the nitrogen forms that can potentially degrade groundwater. Therefore, a TKN limit for the discharge of treated wastewater from Pond A to DDA-2 is not necessary.
 - c. A total nitrogen loading rate limit for DDA-2 would be appropriate to ensure treated wastewater is applied at agronomic rates designed to maximize the nutrient uptake in the root zone.
15. If the Discharger complies with all other limits and discharge specifications of Order R5-2006-0037, relaxing the pH limits for the discharge to DDA-2, deleting the effluent

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limits for the discharge to Pond A, deleting the TSS and TKN effluent limits for the discharge to DDA-2, and adding a total nitrogen loading rate limit for the discharge to DDA-2 should not adversely affect groundwater quality.

16. All wastewater systems at the Facility have already been installed and are currently in use. Though this Order modifies regulatory requirements for the continued use of these structures and facilities, the new requirements are equivalent to those that are already in place, and ensure the same level of environmental protection. The action to rescind Resolution R5-2008-0147 and amend WDRs Order R5-2006-0037 is therefore exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq.) ("CEQA") in accordance with California Code of Regulations, title 14, section 15301, which exempts the "operation, repair, maintenance, [and] permitting ... of existing public or private structures, facilities, mechanical equipment, or topographical features" from environmental review. This action may also be considered exempt because it is an action by a regulatory agency for the protection of natural resources (Cal. Code Regs., tit. 14, § 15307.) and an action by a regulatory agency for the protection of the environment (Cal. Code Regs., tit. 14, § 15308.).
17. The Central Valley Water Board has notified the Discharger and interested agencies and persons of its intent to amend waste discharge requirements for this discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
18. The Central Valley Water Board, in a public meeting, heard, and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that Resolution R5-2008-0147 is rescinded and Order R5-2006-0037 is amended solely to change the Effluent Limitations and Attachment C (as shown in underline/strikeout format in the attachment to this Order). Pursuant to Sections 13263 and 13267 of the Water Code, Guenoc Winery, Inc., its agents, successors

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and assigns, in order to meet the provisions contained in Division 7 of the Water Code and regulations adopted there under, shall comply with amended Order R5-2006-0037 as follows:

1. Section C, Effluent Limitations, of WDRs Order R5-2006-0037 shall be amended as follows:

Wastewater discharged to DDA-2 shall not exceed the following monthly average effluent limits:

<u>Constituent</u>	<u>Units</u>	<u>Discharge to DDA-2¹</u>
<i>Biochemical Oxygen Demand</i>	<i>mg/L</i>	<i>90</i>
<i>Total Dissolved Solids</i>	<i>mg/L</i>	<i>450</i>
<i>pH</i>	<i>pH units</i>	<i>6.0 to 9.5</i>
<i>Chloride</i>	<i>mg/L</i>	<i>9</i>

¹ *Applies to the blend of wastewater and supplemental irrigation water.*

2. Section C, Effluent Limitations, of WDRs Order R5-2006-0037 shall be amended by adding the following:

The total nitrogen applied to the DDA-2 from all sources shall not exceed an annual maximum of 50 pounds per acre per year. Compliance with this requirement shall be determined using the formula listed below:

$$M = \left(\sum_{i=1}^n \frac{C_i \times V_i \times 8.345}{A} \right) + \left(\frac{M_{\text{fertilizer}} + M_{\text{pomace}} + M_{\text{Sludge}}}{A} \right)$$

Where M = total annual nitrogen mass in pounds per acre per year (lb/ac/yr);

C_i = total nitrogen monitoring results for calendar month i in mg/L;

V_i = total effluent discharged to the field during calendar month i in MG;

A = area of the field irrigated in acres,

i = the number of the month (i.e., January = 1, February = 2, etc.);

n = 12;

*M_{xxxx} = total annual mass from any other source (i.e., fertilizer, pomace/DE,
and pond sludge, as applicable) in pounds; and*

Total nitrogen = (nitrate as nitrogen + TKN) in mg/L

3. Attachment C, which is attached hereto and forms part of this Resolution, replaces the site plan included as Attachment C of the WDRs.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality

or will be provided upon request.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on ___.

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PAMELA C. CREEDON, Executive Officer

LLA: 5/22/12