

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

CLEANUP AND ABATEMENT ORDER NO. R5-2004-0704

FOR
THE WINE GROUP, INC.
FRANZIA WINERY
SAN JOAQUIN COUNTY

This Order is issued to The Wine Group, Inc. (hereafter known as “Discharger”) and is based on provisions of California Water Code Section 13304 which authorize the Regional Water Quality Control Board, Central Valley Region (hereafter known as Regional Board) to issue a Cleanup and Abatement (C&A) Order.

The Executive Officer of the Regional Board finds, with respect to the Discharger’s acts, or failure to act, the following:

1. Waste Discharge Requirements (WDRs) Order No. 95-097 was adopted by the Regional Board on 28 April 1995 for the Wine Group’s Franzia Winery in San Joaquin County. The WDRs address the wastewater discharge associated with winery production activity.
2. The Discharger owns and operates the facility and is responsible for complying with this enforcement action.
3. The facility consists of approximately 330 acres of grape vineyards and 62 acres of paved area where various administrative and processing buildings are utilized to produce, bottle, and package wine and high proof alcohol.
4. Sanitary wastewater generated at the facility is discharged to several separate septic tank/leachfield systems, all of which are located within the 62-acre paved area.
5. The facility currently crushes approximately 75,000 tons of grapes per year. The winery operates year-round, while the distillery that produces the high proof alcohol operates about three months per year.
6. Production water is generated from three on-site wells, and is treated by water softeners prior to usage.
7. The facility generates approximately 400,000 gallons of process wastewater per average working day. Process wastewater consists primarily of crush equipment washwater, stillage waste, cellar wash water, vacuum filter process waste, wine ion exchange regeneration brine process waste, regeneration brine from ion exchange units, non-contact cooling water, and storm water runoff.
8. Chemicals used during various processing activities that are introduced into the waste stream include chlorine, trisodium phosphate, sodium hydroxide, sodium carbonate, sulfamic and citric acids, sulfuric acid, ammonia, and sulfur dioxide. The strength of the wastewater is highly variable depending on the season and operations being conducted at the winery and distillery.

9. All process area stormwater and facility wastewater drains to two sumps, from which it is pumped to the vineyards for land application. The waste is treated passively by the land and/or taken up by the crop.
10. From 1935 through 1995, process wastewater was discharged to a series of percolation/evaporation (P/E) ponds located south of the paved portion of the facility.
11. In 1995, the Discharger began discharging the wastewater directly to the vineyard. At that time, the P/E ponds were filled in and planted with grapes.
12. In 2002, a portion of the former P/E pond area was converted into a 12.6 acre-foot emergency discharge reservoir where process wastewater and storm water can be diverted during high-flow or emergency situations.
13. Wastewater is currently applied in an alternating fashion to a network of 3-foot wide by 2-foot deep furrows that are plowed between the rows of vines. Between applications, the furrows are allowed to dry and are then disked and reconstructed prior to the next wastewater application.
14. During the irrigation season, the volume of wastewater applied to the vineyard is typically augmented with well water in order to meet the irrigation demands of the crop. The well water is applied through a drip system.

SOIL AND GROUNDWATER CONDITIONS

15. Site topography is flat and level, and site soils are predominantly sandy loams. Soil permeabilities range from moderately-rapid to rapid, with rates of water intake ranging from 1.5 inches to 3.0 inches per hour.
16. Three groundwater monitoring wells (MW-1, MW-2, and MW-3) have been constructed on the site. The total depth of MW-1 and MW-2 is reportedly approximately 80 feet below ground surface (bgs), with screened intervals between 50 and 80 feet bgs. The total depth of MW-3 is approximately 56 feet bgs, with a screened interval between 35.5 and 55.5 feet bgs.
17. The first encountered groundwater below the site ranges from approximately 40 to 45 feet bgs. Groundwater flow direction is generally to the northwest, with an average gradient ranging from 0.001 to 0.005 ft/ft. MW-1 and MW-3 are considered to be hydraulically downgradient of the process water land application area and MW-2 is considered to be the most upgradient of the wells. However, because MW-2 is within the land application area, it may not be completely representative of true background conditions.
18. The groundwater monitoring data collected to date indicate that concentrations of dissolved solids often associated with winery wastewater are elevated in the two downgradient monitoring wells as compared to concentrations in the upgradient monitoring well. The average electrical conductivity, total dissolved solids, fixed dissolved solids, sodium, magnesium, chloride, and sulfate concentrations in the downgradient wells range from two to fifteen times higher than in the upgradient well. The data also indicate that nitrate concentrations in one downgradient well, MW-1, are approximately eight times the upgradient concentrations and five times higher than the

California maximum contaminant level (MCL). The California MCL (i.e., drinking water standard) is equivalent to 10 mg/l of nitrate as nitrogen, while the average concentration of nitrate as nitrogen in MW-1 is approximately 50 mg/l.

ENFORCEMENT HISTORY

19. On 15 September 2003, Regional Board staff issued a Notice of Violation (NOV) to The Wine Group for violating the Groundwater Limitations contained in WDRs Order No. 95-097. The NOV ordered the preparation and submittal of a *Groundwater Degradation Evaluation Report* to confirm whether or not the discharge from this facility is degrading groundwater.
20. On 29 December 2003, the Discharger submitted a report titled *Preliminary Groundwater Evaluation Report for the Wine Group, Franzia Winery*. The report concluded that there appears to be a correlation between the area where winery process wastewater is applied and elevated levels of constituents of concern in the groundwater downgradient of that area. The report also indicated that more information and further investigation were necessary in order to fully evaluate current conditions and to plan necessary improvements. The report provided a conceptual plan for conducting additional data collection and analysis, and for the preparation of a wastewater treatment system and management improvement plan.
21. Regional Board staff have completed a review of this report and concur with the report conclusions and the proposed conceptual plan. The tasks and timeline for task completion contained in this Order are generally consistent with those contained in the report. A C&A Order is appropriate to ensure that the Discharger completes the studies and proposes steps to prevent further groundwater degradation.

REGULATORY CONSIDERATIONS

22. The Regional Board's Water Quality Control Plan for the Sacramento and San Joaquin River Basins (Basin Plan) designates beneficial uses, includes water quality objectives to protect the beneficial uses, and includes implementation plans to implement the water quality objectives.
23. As a result of the events and activities described in this Order, the Discharger has caused or permitted waste to be discharged in such a manner that it has created, and continues to threaten to create, a condition of pollution or nuisance and potential public health threat. Water quality objectives in the Basin Plan include state drinking water standards by reference to Title 22 California Code of Regulations, Division 4, Chapter 15. As described in Findings 16 through 18, the discharges of waste have caused the groundwater to exceed or threaten to exceed state drinking water standards contained in the Basin Plan. Concentrations of waste greater than the water quality objective constitutes pollution as defined in California Water Code Section 13050.
24. Surface water discharges from this facility enter the Stanislaus River. The beneficial uses of the Stanislaus River from Goodwin Dam to the San Joaquin River as stated in the Basin Plan are municipal and domestic supply; agricultural supply; industrial process supply; industrial service supply; hydropower generation; water contact recreation; non-contact recreation; warm freshwater habitat; cold freshwater habitat; migration of aquatic organisms; spawning, reproduction, and/or early development; and wildlife habitat.

25. The beneficial uses of the underlying groundwater as stated in the Basin Plan are municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.
26. Section 13304(a) of the California Water Code provides that: “Any person who has discharged or discharges waste into waters of this state in violation of any waste discharge requirements or other order or prohibition issued by a regional board or the state board, or who has caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged into the water of the state, and creates, or threatens to create, a condition of pollution or nuisance, shall upon order of the regional board clean up the waste or abate the effects of the waste, or, in case of threatened pollution or nuisance, take other necessary remedial action, including but not limited to, overseeing cleanup and abatement efforts. Upon failure of any person to comply with the cleanup or abatement order, the Attorney General, at the request of the board, shall petition the superior court for that county for the issuance of an injunction requiring the person to comply with the order. In the suit, the court shall have jurisdiction to grant a prohibitory or mandatory injunction, either preliminary or permanent, as the facts may warrant.”
27. Section 13267(b) of the California Water Code states: “ In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.”
28. Technical reports are required to ensure compliance with this C&A Order and WDRs Order No. 95-097, and to ensure the protection of the public health and safety. The Discharger owns and operates the facility at which the subject waste is discharged.
29. The issuance of this Order is an enforcement action by a regulatory agency and is exempt from the provisions of the California Environmental Quality Act (CEQA), pursuant to Section 15321(a)(2), Title 14, California Code of Regulations.
30. Any person affected by this action of the Regional Board may petition the State Water Resources Control Board (State Board) to review the action in accordance with Section 2050 through 2068, Title 23, California Code of Regulations. The petition must be received by the State Board within 30 days of the date of this Order. Copies of the law and regulations applicable to filing petitions are available at http://www.swrcb.ca.gov/water_laws/cawtrcde/wqpetition_instr.html and will also be provided upon request.

IT IS HEREBY ORDERED that, pursuant to Sections 13304 and 13267 of the California Water Code, The Wine Group, Inc. shall cleanup and abate the condition of pollution or nuisance and potential threat to public health caused by discharge from the Franzia Winery facility, in accordance with the scope and schedule set forth below. Compliance with this requirement shall include, but not be limited to, the following measures:

1. The Wine Group shall comply with all aspects of WDRs Order No. 95-097 and MRP Order No. 95-097, except for the Groundwater Limitation. The Discharger shall make all practicable efforts to comply with the Groundwater Limitation during the study period described in this Order,

and at the end of the study period, shall submit a Report of Waste Discharge proposing such improvements that it will comply with the Limitation in the future.

2. By **21 June 2004**, The Wine Group shall submit a *Groundwater Protection Workplan* that provides a detailed description of the studies, investigations, and plans required by Items 3 through 5 of this Order to evaluate current conditions, estimate future conditions, and identify and implement the improvements necessary in order to adequately protect groundwater. The Executive Officer must approve the plan prior to its implementation. The Workplan shall include:
 - a. A *Groundwater Characterization Workplan* that describes a plan to fully evaluate the quality of the groundwater upgradient, beneath, and downgradient of the land application area. The workplan shall also describe the wells to be sampled, sampling frequency, and constituents to be analyzed.
 - b. A *Groundwater Well Installation Workplan* shall be prepared in accordance with, and including the items listed in, Section 1 of Attachment A: *Requirements for Monitoring Well Installation Workplans and Monitoring Well Installation Reports*. The well installation workplan shall propose the installation of a sufficient number of properly located monitoring wells to monitor the groundwater upgradient, beneath, and downgradient of the land application area.
 - c. A *Wastewater Characterization Workplan* that describes a sampling program for each specific waste stream (winery process water, distillation process water, vacuum filter, wine ion exchange, cooling water, water softening, and any other discrete processes). The workplan shall detail the location at which samples will be collected, sampling frequency, and constituents to be analyzed.
 - d. A *Wastewater Treatment Evaluation Workplan* that describes an evaluation of the vineyard soils and their ability to treat the wastewater such that it will not degrade the underlying groundwater.
3. By **1 October 2004**, The Wine Group shall submit a *Monitoring Well Installation Report* that contains the information described in Section 2 of Attachment A.
4. By **1 November 2005**, The Wine Group shall submit a *Groundwater Characterization Report* that characterizes the hydrogeologic conditions and groundwater quality based on available data from all wells described in the approved Workplan.
5. By **1 December 2005**, The Wine Group shall submit a *Wastewater Characterization and Wastewater Treatment Evaluation Report* that will present the results of both the wastewater characterization and the treatment system evaluation based on data from the wastewater generating processes for an entire year period. . The *wastewater characterization* portion of this study should describe site-specific wastewater characteristics and assess seasonal variations of the processes that contribute to the wastewater stream, including the winery process, the distillation process, the vacuum filter process, the wine ion exchange process, the water softening process, and associated cooling water discharges. The *wastewater treatment* portion of the study should evaluate the

hydraulic characteristics and other qualities of the vineyard soils, identify potential treatment problems and mitigation measures, compare the results of the wastewater characterization to the results of the treatment evaluation, and identify and describe potential wastewater, salinity, and nitrate reduction, reuse, recycling, and treatment opportunities.

6. By **1 April 2006**, The Wine Group shall submit a Report of Waste Discharge that includes a *Wastewater System Improvement Plan and Final System Design*. The *Wastewater System Improvement Plan* shall examine, compare, and evaluate the wastewater, salinity, and nitrate reduction, reuse, recycling and treatment opportunities, and shall identify best management practices and best practicable treatment and control measures to be implemented to prevent groundwater degradation. The report shall also provide the rationale for the improvement measures chosen. The *Final System Design* shall present the design for the proposed wastewater system improvements that will protect groundwater beneath the site from degradation. The Report of Waste Discharge shall include a proposed schedule for implementation of the plan and design.
7. Beginning with the **Second Quarter 2004**, the Wine Group shall submit quarterly progress reports describing the work accomplished to date to comply with this Order. The progress reports are due the first day of the second month following the end of the quarter (i.e., by **1 February, 1 May, 1 August, and 1 November**). The Second Quarter 2004 report is due by 1 August 2004.

In addition to the above, the Discharger shall comply with all applicable provisions of the California Water Code that are not specifically referred to in this Order. As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all technical reports shall be prepared by, or under the supervision of, a California Registered Engineer or Registered Geologist and signed by the registered professional.

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement or may issue a complaint for administrative civil liability.

Failure to comply with this Order may result in the assessment of an Administrative Civil Liability up to \$1,000 or up to \$10,000 per day of violation, depending on the violation, pursuant to the California Water Code, including sections 13268, 13271, and 13350. The Regional Board reserves its right to take any enforcement actions authorized by law.

This Order is effective upon the date of signature.

THOMAS R. PINKOS, Executive Officer

(Date)

Attachment A: *Requirements for Monitoring Well Installation Workplans and Monitoring Well Installation Reports*