

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION**

**ORDER NO. R2-2006-0076**

**WASTE DISCHARGE REQUIREMENTS FOR:**

**COSENTINO WINERY, COSENTINO WINERY LLC, and COSENTINO WINERY  
WASTEWATER TREATMENT SYSTEM, 7415 ST. HELENA HIGHWAY, NAPA COUNTY**

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board), finds that:

1. **Purpose of Order.** Cosentino Winery is an existing commercial winery facility located in an unincorporated area of Napa County north of the town of Yountville. The area is not served by municipal sewerage systems. All development in the area is served by individual on-site wastewater treatment and dispersal systems. Cosentino Winery and the adjacent Mustards Grill restaurant were previously served by a single, jointly owned ("old") wastewater system located on the properties of the two facilities. New wastewater systems are now under construction to provide separate systems for each facility on their own respective properties. These systems include discharges of waste to land that are subject to regulation by the Board. The purpose of this Order is to prescribe waste discharge requirements for the new wastewater system serving Cosentino Winery. The new wastewater system serving Mustards Grill is regulated under waste discharge requirements in Board Order No. R2-2006-0071.
2. **Discharger.** Cosentino Winery and the property on which Cosentino Winery is located are owned by Cosentino Winery LLC. Cosentino Winery and Cosentino Winery LLC are collectively called the Discharger. The Discharger is legally responsible for the wastewater system and the discharges of waste to land regulated by this Order, and for compliance with this Order. The wastewater system is managed and operated by wastewater treatment operators under contract with the Discharger.
3. **Report of Waste Discharge.** A Report of Waste Discharge (ROWD) in application for waste discharge requirements for the subject wastewater system was submitted on behalf of the Discharger, by the Discharger's agent, Kennedy/Jenks Consultants (KJC). The ROWD consists of the following:
  - a. **Technical Report.** A bound report titled, *Revised Report of Waste Discharge for Cosentino Winery, Yountville, California, 18 February 2005*, prepared and submitted by KJC, received February 22, 2005.
  - b. **Design Drawings.** Two design drawings, 24" x 36" each, both dated Feb 2005, prepared by KJC:

| <u>Sheet No.</u> | <u>Title</u>  |
|------------------|---|
| C-1              | Cosentino Winery, Sanitary/Process Wastewater Treatment Systems, Site Plan; and                   |
| C-2              | Cosentino Winery, Sanitary/Process Wastewater Treatment Systems, Detailed Site Plans and Section. |
  - c. **ROWD Application Form (Form 200).** A completed Form 200, signed by Julie Weinstock, signature dated 2/18/05, 3 pages, as Appendix A in the bound report of Item a above.
  - d. **Transition Plan.** A plan of actions with anticipated time schedule for transition from the existing wastewater system to the new system, titled, *Modified Transition Plan for Converting the Combined Wastewater Treatment System to Separate Wastewater Treatment Systems, Mustards Grill and Cosentino Winery, 7399 and 7415 St. Helena Highway, Yountville, California*, submitted with cover letter dated 17 March 2005 from Peter Riechers of Riechers Spence & Associated, Inc., also signed by Robert S. Chrobak of Kennedy /Jenks Consultants, Inc., received March 17, 2005.

4. **Report of Waste Discharge Complete.** Board staff reviewed the ROWD, found the ROWD to be complete, and notified the Discharger of that by letter dated March 24, 2005.
5. **ROWD Addendum.** Subsequent to the ROWD submittal and ROWD Complete letter described above, additional ROWD information was submitted. This consists of an updated Site Plan drawing, showing updated locations of the process wastewater discharge area. The drawing was prepared and submitted by KJC, dated 5/5/06, received May 9, 2006.
6. **Waste Discharge Requirements.** The old wastewater system was regulated by Board Order No. 89-072, Water Reclamation Requirements for Mustards Grill and Crystal Valley Cellars, in Napa Valley, Napa County, adopted on May 17, 1989. This current Order prescribes waste discharge requirements for the new Cosentino Winery wastewater system and supercedes Order No. 89-072. This Order rescinds Order No. 89-072 with respect to Cosentino Winery.
7. **Facility Site.** Cosentino Winery is located on a 4.29 acre parcel on the west side of State Highway 29, also known as St. Helena Highway, about one and one half miles northwest of the town of Yountville, and 1000 feet south of Yount Mill Road. The street address is 7415 St. Helena Highway. The property parcel is identified as Napa County Assessors Parcel Number (APN) 27-540-13. For purposes of this Order, this property comprises the facility site.
8. **Facility Site Characteristics.** The facility site is located in the Napa River watershed, in the generally level floor of the Napa Valley. Elevation is 160 to 165 feet above mean sea level. Foundation soil material consists of older alluvial fan deposits, overlain by Class II clays and clay loams of the Clear Lake and Bale soil series, characterized as somewhat poorly drained with permeability of 0.1 to 0.2 inches per hour. Groundwater is relatively shallow, ranging from 12 feet to 3 feet below ground surface. Natural ground slope is about one percent. Natural surface water drainage is to the northeast. Runoff is slow to very slow and the erosion hazard is slight to none. Storm water runoff drains through constructed drainage ditches and unnamed tributaries to the Napa River. The Napa River is located about three quarters of a mile northeast of the site. Average annual rainfall in this area is about 27 inches.
9. **Facility Uses and Napa County Use Permits.** Cosentino Winery is a commercial business facility with uses regulated by Napa County Use Permit. The permitted uses consist of grape crushing and wine production of 30,000 gallons per year, and public wine tasting and tours. The facility is regulated under Use Permit # U-518687, approved by the Napa County Conservation, Development and Planning Commission on June 3, 1987, and a subsequent modification, # 93362-MOD, approved by the Napa County Zoning Administrator on April 15, 1994. The old wastewater system was permitted under Use Permit # U-128889. The new Cosentino Winery wastewater system is permitted under Use Permit # 03474-UP, approved by the Napa County Planning Commission July 6, 2005, effective July 20, 2005.
10. **Discharges.** The discharges of waste to land regulated by this Order are comprised of treated winery process wastewater and treated sanitary wastewater from the Cosentino Winery facility, discharged to land on the facility site, by means of two separate systems - a process wastewater system and a sanitary wastewater system. This Order addresses both of these systems, their operation, and the respective discharges of treated wastewater to land.
11. **Discharge Quantity.** Projected facility wastewater flows, which are also the wastewater system design flows, are identified in the ROWD as 250,000 gallons per year (gpy) process wastewater and 100,000 gpy sanitary wastewater. Flows for the discharges to land are identified as between 27,000 to 91,000 gpy of treated process wastewater, and 100,000 gpy of treated sanitary wastewater. Total annual process wastewater discharges are variable in part due to variable effects of precipitation and evaporation on the process wastewater treatment pond.

**12. Discharge Quality.** Treatment system design effluent quality identified in the ROWD is as follows:

| <u>Parameter</u> | <u>Units</u> | <u>Process Wastewater</u> | <u>Sanitary Wastewater</u> |
|------------------|--------------|---------------------------|----------------------------|
| BOD*:            | mg/L         | < 40                      | < 30                       |
| TSS*:            | mg/L         | < 40                      | < 30                       |
| Nitrogen:        | mg/L as N    | < 10                      | < 20                       |
| pH               | pH units     | 7 ±                       | 7.5 ±                      |
| Total Coliform   | MPN/100 ml   | ---                       | 230                        |

\* (BOD = 5-day Biochemical Oxygen Demand at 20°C; TSS = Total Suspended Solids).

**13. Wastewater Systems - General Description.** The new Cosentino Winery wastewater system is comprised of two separate systems - a process wastewater system for treatment and discharge of winery process wastewater from the Cosentino Winery wine production activities, and a sanitary wastewater system for treatment and discharge of sanitary wastewater from winery employees and visitors. The two wastewater streams are segregated at the respective sources, and then managed by the separate systems.

Each wastewater system is comprised of all equipment and control systems that provide collection, conveyance, treatment, storage and discharge to land of the respective wastewater streams. Descriptions of the wastewater systems are given below, based on information contained in the ROWD.

Attachment A of this Order is a plan view drawing of the facility site showing facility site boundaries and the major components of the wastewater systems. Attachment B of this Order is a flow diagram illustrating the wastewater treatment and discharge processes. Attachment C of this Order is a tabulation of the Wastewater System Design Criteria. The information presented in these Attachments was submitted to the Board by means of a correspondence conveying comments about a draft of this Order, from the Discharger's agent, Kennedy/Jenks Consultants, dated 22 June 2006.

**Sanitary Wastewater System**

**14. General Description.** The sanitary wastewater system includes collection by watertight pipes, a recirculating textile filter treatment system, a tablet chlorinator unit, an effluent holding tank, discharge pumps and a subsurface drip dispersal system. Treated, disinfected sanitary wastewater is discharged year-round, below ground, through the subsurface drip dispersal system in the dedicated sanitary wastewater discharge area adjacent to the south side of the winery building.

**15. Wastewater Sources and Flows - Sanitary Wastewater.**

a. Sanitary wastewater is generated from the following fixtures located in the Cosentino Winery facility:

- (1) Employee Break Room: Kitchen sink faucet, dishwasher, restroom sink, toilet, shower;
- (2) Executive Office: Sink faucet, toilet, shower;
- (3) Tasting Room: 3 sink faucets, clothes washer, 2 toilets;
- (4) Cellar: Restroom sink faucet and toilet, four hose bibs, water softener filters; and
- (5) Library: Sink faucet.

Wastewater generation and system design flows reported in the ROWD are as follows: Annual total flow = 100,000 gpy, Peak daily flow = 1,000 gpd, and Average daily flow = 275 gpd.

b. Wastewater flows authorized by this Order for influent to the sanitary wastewater system are:

- Annual Total = 100,000 gallons per year; and
- Peak Daily Flow = 1,000 gallons per day.

**16. Sanitary Wastewater.** Sanitary wastewater flows by gravity through watertight pipes to the 5,000 gallon processing tank of the Recirculating Textile Filter system.

**17. Recirculating Textile Filter System.** The Recirculating Textile Filter (RTF) system includes a processing tank, four textile media filter pods, a duplex pump system, a recirculating splitter valve, and control panel. This system provides biological treatment of wastewater by microorganisms affixed to the filter media, and includes controlled timed dosing of the filters and split-flow recirculation for enhanced treatment, to provide organic (BOD) and solids reduction and also nitrogen removal.

**a. RTF System Components and Process Flow.** The processing tank (Tank SW2) is a 5,000 gallon 2-compartment concrete tank with an internal baffle wall with flow-through ports. The first compartment is 3,333 gallons and the second 1,666 gallons. Each compartment has an access opening with watertight risers extending to or above ground surface. Influent enters the first compartment where solids settling and separation occurs, and then flows through the baffle wall ports to the second compartment. The second compartment is equipped with a proprietary duplex pump system (Orengo Systems Inc., Biotube® Pump Package) with programmable dosing timer controls. Wastewater is periodically pumped from the second compartment to the textile filter pods in time-controlled doses via a manifold pipe system that distributes wastewater to two filter pods at one pump cycle, and then to the other two at the next pump cycle. The textile filter pods (AdvanTex® model AX20) are each contained in separate rectangular fiberglass tanks (Tanks SW3a, SW3b, SW3c, and SW3d) of about 500 gallons each. The tanks are hydraulically connected by the influent manifold system and a separate manifold for filter effluent (filtrate) collection, and also have manifolded air inlet pipes. The filter media is high-porosity polyester plastic in flat sheets, draped over support rods affixed in the upper section of the tank, widthwise and in close proximity. Wastewater is distributed over the filter media by a distribution pipe network with multiple laterals, each with multiple orifices and flow dispersion shields over each orifice. After passing through the filter media, filtrate collects at the tank bottom, then flows through the filtrate manifold to the recirculating splitter valve assembly. The splitter valve splits the filtrate flow, such that a portion of the flow is diverted back to the first chamber of the processing tank (for subsequent recirculation through the filter pods), and a portion of the flow is discharged out of the filter unit. The typical recirculation flow ratio is 4:1. Effluent from the RTF System flows by gravity to the Tablet Chlorinator.

**b. RTF System Design Criteria.** Design flows are 275 gpd average flow and 1,000 gpd peak flow. Design influent wastewater strength for the RTF system is identified in the ROWD as BOD = 500 mg/L, TSS = 200 mg/L and Total Nitrogen = 55 mg/L. Design effluent quality is: BOD and TSS each less than (<) 30 mg/L and Total Nitrogen of < 20 mg/L as N. RTF system operation will include influent and effluent quality monitoring.

**18. Tablet Chlorinator.** Effluent from the RTF system will be disinfected by chlorination administered by a tablet chlorinator. This unit uses dry-material tablets of calcium hypochlorite which are dissolved as water passes over the tablets. Water flow over the tablets is controlled by a flow meter and control valve, and the liquid level in the tablet housing column where increased flows result in elevated level and thus contact with multiple tablets. Dosage will be governed in part by results of coliform and chlorine residual sampling of the final effluent discharged to land. The ROWD identifies final effluent coliform level design criteria of 230 MPN/100 ml, and anticipated chlorine residual level of 5 mg/L. The identified coliform criteria acceptable, but the objective for final effluent chlorine residual level should be as close to zero as feasible. Effluent from the Tablet Chlorinator flows by gravity to the Effluent Holding Tank.

**19. Effluent Holding Tank.** The Effluent Holding Tank (Tank SW4) is a 3,000 gallon tank that provides contact time for the disinfection process, flow equalization, emergency storage if needed, scale inhibitor feed dosing, and as a pump tank for pumping final effluent to the discharge area. The pump system at this tank controls all discharges of treated sanitary wastewater to the Sanitary Wastewater Discharge Area. All flows discharged by this pump station are monitored and measured.

**20. Scale Inhibitor Feed System.** A scale inhibitor feed system will be used to control formation of scale from calcium carbonate and iron within the discharge system drip dispersal tubing. This system involves periodic addition of an appropriately measured weight of solid hexametaphosphate material into the Effluent holding Tank, on an as-needed basis. The ROWD identifies a projected dosing rate of about 0.42 pounds per week, and concentration of about 1 mg/L as phosphate.

**21. Microstrainer.** Downstream of the Effluent Holding Tank, a 60 or 80 micron corrosion resistant pressure microstrainer is installed to remove suspended solids, grit and sand to protect the subsurface drip dispersal system. The microstrainer is the final treatment process prior to discharge to land. The quality of the waste discharged to land is monitored by sampling downstream, after, this final treatment process.

**22. Sanitary Wastewater Discharge Area.** Treated sanitary wastewater is discharged to land in a dedicated discharge area located on the facility site, adjacent to the south side of the winery building and west of the south vineyard. The discharge area is about 5,000 square feet in gross area. The discharge system pipe network will be installed within this area and the finished surface will be a grass-vegetated lawn area.

**23. Sanitary Wastewater Discharge System.** The discharge system is comprised of a subsurface pressurized pipe network of proprietary manufactured tubing with built-in 'drip' emitters (Geoflow, Inc. Wasteflow® Dripline) connected to supply and return manifold pipes.. Discharge tubing lines are installed with one foot spacing between adjacent lines and six inches below the finished surface grade. Emitters are located at one-foot intervals along each line. The design soil application hydraulic loading rate is 0.1 gallons per day per square foot. The design discharge area is 4,300 square feet. The design flow of the discharge system is 430 gallons per day.

**24. Dispersal System Operation.**

- a. The discharge system is designed to accommodate discharges of treated sanitary wastewater year-round. Treated wastewater is discharged into and through the system for only a small portion of each day, typically 2 hours per day, with the balance of the day affording time for effluent dispersal by plant uptake, evapotranspiration and infiltration into underlying soil. The design discharge flows are as follows: Annual total = 100,000 gpy, and peak daily flow = 430 gpd.
- b. Wastewater flows authorized by this Order for the sanitary wastewater discharge system are:  
 Annual Total = 100,000 gallons per year;  
 Maximum daily flow = 430 gallons per day.

**25. Sanitary Wastewater System Tanks.** The Sanitary Wastewater System includes multiple tanks, used for collection, treatment and pumping of wastewater, as noted in the above descriptions. All tanks will be tested and verified to be water-tight as part of the new system construction. All tanks will be inspected at least annually for solids accumulation and general condition, and serviced as necessary including removal of accumulated solids, to maintain the tanks in proper operating condition. A summary of tank characteristics is given below:

| Tank # | Reference Name        | Capacity (gallons) |           | Dimensions (feet, inches) |       |       | Age (years) | Compartments |
|--------|-----------------------|--------------------|-----------|---------------------------|-------|-------|-------------|--------------|
|        |                       | Total              | Operating | Length                    | Width | Depth |             |              |
| SW2    | RTF Processing Tank   | 5,000              | **        | **                        | **    | **    | New         | 2            |
| SW3*   | RTF Filter Pod Tank   | 500                | --        | 7'7"                      | 3'4"  | 2'7"  | New         | 1            |
| SW4    | Effluent Holding Tank | **                 | 3,000     | **                        | **    | **    | New         | 1            |

\* SW3: System includes four identical tanks, SW3a,-3b,-3c,-3d, each of characteristics shown.

\*\* = data not specified in ROWD. Data to be provided with system As-Built Plans.

## Process Wastewater System

- 26. General Description.** The process wastewater system includes collection of winery process waste by trench floor drains, gravity-driven flow through watertight pipes, a pump tank and pumps, a treatment pond with two treatment zones created by an internal wooden baffle wall and aeration by three mechanical aerators, pond effluent pumps, and an above-ground drip irrigation system. Treated process wastewater is discharged intermittently during dry weather through the drip irrigation system in a defined process wastewater discharge area within existing wine grape vineyards west and southwest of the winery building.
- 27. Wastewater Sources and Flows.** Process wastewater is generated from the grape processing and wine production activities. Wastewater generation and system design flows reported in the ROWD are as follows: Annual total flow = 250,000 gpy; During crush period (typically August through October), peak daily flow = 4,000 gallons per day (gpd) and average daily flow = 1,000 gpd; During non-crush period, peak daily flow = 2,000 gpd, and average daily flow = 600 gpd. Wastewater flows authorized by this Order for influent to the process wastewater system are as follows:
- Annual Total = 250,000 gallons per year;
  - Peak Daily Flow, Crush Season = 4,000 gallons per day; and
  - Peak Daily Flow, Non-Crush Season = 2,000 gallons per day.
- 28. Process Wastewater Collection - Inside.** Winery process wastewater is collected from inside the winery building by longitudinal trench floor drains with perforated steel coverings located in the wine processing area, and just inside and parallel to the main work access and vehicle entrance opening in the building's north wall (work entrance). All wine processing equipment is used and stored inside the building in areas serviced by the trench floor drains. Wastewater collected by the trench floor drains flows by gravity through a watertight pipe to the Cosentino Lift Station (Tank PW3). All such wastewater flows are monitored and measured.
- 29. Process Wastewater Collection - Outside.** Wastewater is also collected from the paved area outside of the building's work entrance (paved area) by means of a collection system located along the north edge of the paved area (collection system). The paved area is used for receipt and handling of materials delivered by vehicles, temporary storage of grapes stored in grape bins, and rinsing empty grape bins and wine barrels. Wastewater from this area is comprised of water from bin and barrel rinsing, and storm water from rainfall onto this area that may come into contact with winery equipment or materials (contaminated storm water).

The collection system is used (1) to capture and convey uncontaminated storm water runoff from the paved area to the public storm water conveyance ditch along the west side of State Highway 29 at the east boundary of the facility site (Highway 29 storm drain), via subsurface pipes that run along the north edge of the paved access driveway to and from Highway 29 (driveway), and (2) to capture and convey wastewater from the paved area to the Cosentino Lift Station. The collection system includes a subsurface concrete catch basin (Tank PW2) located at the north edge of the paved area near where it transitions to the driveway. The catch basin is equipped with a submersible pump controlled by a float switch activated by water level changes within the basin, and a diverter valve on the basin's outlet pipe leading toward the Highway 29 storm drain. The paved area slopes downhill from the building toward this catch basin and toward the driveway. A small asphalt berm is installed across the width of the driveway, immediately adjacent to the catch basin, to control the flow of all water from the paved area into the catch basin. When the diverter valve is closed, no water flows out of the basin toward the Highway 29 storm drain, water entering the basin causes the basin water level to rise until the float switch activates the pump, and the collected water is pumped through a watertight pipe to the Cosentino Lift Station.

The collection system is operated (i.e., the diverter valve is closed), to capture and convey all water from the paved area to the process wastewater system, whenever there is industrial activity in the paved area (e.g., receiving grapes, barrels or tank shipments, movement of bulk wine, moving or cleaning barrels or bins, or other processes that could contaminate storm water runoff). The equipment used to control capture and convey wastewater from the paved area, to the Cosentino Lift Station are components of the process wastewater system. All wastewater flows from the paved area are monitored and measured.

### 30. Cosentino Lift Station.

**a. Tank.** The Cosentino Lift Station (Tank PW3), is a tank with pumps from which the wastewater is pumped to the process wastewater pond. This tank is a concrete, one-compartment tank with a total capacity of 1,770 gallons and operating capacity of 1,600 gallons. The tank is equipped with one access opening and watertight riser over the opening extending from tank top to ground surface, and water tight riser lid.

**b. Pumps.** The Cosentino Lift Station will be equipped with two 1-horsepower Goulds submersible pumps, installed in the second compartment of the lift station tank. The pumps will be equipped with a duplex alternating "on-cycle" control system with integrated alarm and four float switches at different water levels that perform the following functions:

- Low low water level float: Turns both pumps off when water drops below this level;
- Low water level float: Turns one pump on (alternating between pumps each time);
- Medium water level float: Turns both pumps on.
- High water level float: Activates alarm

**c. Alarm Requirements.** In order to assure adequate and reliable wastewater system operations, all alarm systems shall include audible and visual alarm notification in the vicinity of the wastewater systems, and automated notification of wastewater system operator(s) available to respond as necessary to the alarm, such as by automated telephone dialer.

**d. Discharges.** Wastewater is pumped from the Cosentino Lift Station through a watertight 2-inch diameter PVC pipe to the Process Wastewater Pond. The lift station effluent discharge line will be equipped with a magnetic totalizing flow meter, installed in accordance with manufacturer's specifications, to measure total winery process wastewater flows discharged to the pond.

### 31. Process Wastewater Pond.

**a. Pond Location.** The Process Wastewater Pond is an earth-bermed pond located at the south corner of the facility site with a footprint area of about ½ acre. This pond was previously part of the old wastewater system, as Pond 1 of a 2-pond system (the second pond was located on Mustards Grill property). For the new process wastewater system the pond will be reconstructed.

**b. Pond Reconstruction.** Pond reconstruction will include the following: Existing pipe and valve between the two old ponds will be removed; Point of discharge into the pond will be relocated; Existing influent pipe may be relocated and/or reconstructed to accommodate that; Water and accumulated solids at pond bottom will be removed and hauled away for disposal; South berm will be reconstructed to provide clearance from the Mustards Grill/ Cosentino Winery property line; Berms will be regraded to provide a 12-foot wide top (at elevation 169) with 2% slope toward the outside, and inside berm slopes of 2 to 1 (run to rise); New baffle wall will be constructed inside the pond; New outlet pipe and pump station for pond effluent distribution will be installed; and aerators will be fitted with stainless steel anti-erosion assemblies. Pond modifications will make use of existing pond soil, compacted to 95% and to achieve a maximum permeability of  $1 \times 10^{-6}$  centimeters per second (cm/s).

**c. Baffle Wall.** The baffle wall will be constructed of 2" x 12" redwood planks anchored to four vertical 6" x 6" redwood posts set in 18" diameter 4.5 feet deep concrete encasements extending 4.5 feet below the pond bottom. The wall will extend from pond bottom to one foot below pond top (elevation 168) with plank ends extending about two feet into the inside berms. The wall will have four 8" x 8" holes, located near the post closest to the northeast berm, in a vertical alignment, with holes at 1 foot, 3 feet, 5 feet and 7 feet from pond bottom. The baffle wall will divide the pond into two zones, an influent zone of about two thirds of the pond volume, and an effluent zone of about one third of the pond volume.

**d. Aerators.** The pond will be equipped with three surface aerators, with two in the influent zone and one in the effluent zone. Each aerator is a 3-horsepower unit, constructed of stainless steel, with fiber-glass floats, secured by cables to anchors in the pond berm, and anti-erosion assembly. Each aerator has a pumping rate of 2,750 gallons per minute and oxygen transfer rate of 3 pounds of oxygen per horsepower per hour. The minimum operating water depth for the aerators is three feet.

**e. Pond Dimensions and Capacities.** The reconstructed pond characteristics will include:

|                              |  |
|------------------------------|--|
| Bottom elevation:            | 159 feet;  |
| Top Elevation:               | 169 feet;  |
| Total Depth:                 | 10 feet;   |
| Maximum Capacity:            | 519,000 gallons (full pond; pond water at 10 feet of depth);               |
| Two-foot freeboard Capacity: | 372,000 gallons (at two feet of freeboard; pond water at 8 feet of depth); |
| Pond Top Water Surface Area: | 10,600 square feet (full pond; pond water at 10 feet of depth);            |
| Minimum Operating Depth:     | 3 feet; and  |
| Minimum Operating Volume:    | 102,800 gallons (68,500 influent zone; 34,300 effluent zone).              |

**32. Process Wastewater Pond Operation.** Wastewater is discharged into the influent zone of the pond from the Cosentino Lift Station. Typical hydraulic loading to the pond will be about 700 gpd annual average, with 600 gpd average during non-crush and 1,000 gpd average during crush season, and maximum discrete hydraulic loading during crush of 4,000 gpd. Typical organic loading will be 20 pounds per day (lbs/d) average during non-crush and 67 lbs/d average during crush, and an annual total of about 13,000 pounds per year. Typical suspended solids loading will be 1.0 lbs/d average and 3.3 lbs/d peak during non-crush, and 4.2 lbs/d average and 17 lbs/d peak during crush, and an annual total of about 760 pounds per year. The pond operation objectives include: to provide adequate wastewater treatment, to maximize available storage capacity prior to each wet weather season, to prevent nuisance odors, and to maintain a freeboard of at least two feet at all times, for weather conditions up to and including precipitation for a 10-year return period rainfall (42 inches per year). During periods of extreme wet weather in excess of 10-year return period rainfall, the pond may be operated to allow storage up to the one foot freeboard level, and in which case the Discharger will implement pond water removal by pump truck for haul-away and disposal at a legal point of disposal in order to regain and retain the minimum freeboard of two foot. Treated wastewater from the pond (pond effluent) is drawn from the effluent zone of the pond for discharges to land.

**33. Process Wastewater Discharge Pump.** Pond effluent is discharged from the pond to the Process Wastewater Discharge Area drip irrigation system by means of the Process Wastewater Discharge Pump. This pump is located on a concrete pad located outside the north corner of the pond berm. This pump station controls all discharges of pond effluent to the Process Wastewater Discharge Area. All flows through this pump system are monitored and measured.

**34. Hypochlorite and Scale Inhibitor Feed Systems, and Microstrainer.** Prior to discharge into the drip irrigation system, pond effluent is treated to strain solids and to control bioslime formation and scale accumulation within the irrigation system that could plug the drip emitters. Treatment consists of periodic additions of hypochlorite to control bioslime and polyphosphate material to prevent scale.

Materials are added to the effluent pipeline downstream of the pond effluent pump station. Typical doses are identified as 2 to 4 mg/L of sodium hypochlorite and 2 to 5 mg/L as Phosphate of a polyphosphate blend material, for several hours per day. All dosages of materials used for bioslime or scale inhibitor treatment will be monitored for concentrations, duration and total volume of material added. Upstream of the material feed systems, a 60 or 80 micron corrosion resistant pressure microstrainer is installed to remove suspended solids, grit and sand to protect the drip irrigation system. The chemical material feed system is the final treatment process prior to discharge to land. The quality of the waste discharged to land is monitored by sampling downstream, after, this final treatment process.

**35. Process Wastewater Discharge Area.** The Process Wastewater Discharge Area is the area on the facility site within which treated process wastewater is discharged to land. The ROWD identifies this area as within vineyards west of the winery building in an area called the West Vineyard. The Process Wastewater Discharge Area consists of only a portion of the overall West Vineyard, in part in order to maintain at a horizontal setback distance of at least 100 feet between the discharges and all domestic water supply wells, of which there are two on adjacent properties in close proximity to the property boundaries adjacent to the vineyard area. Runoff from the discharge area off of the facility site will be prevented and controlled by physical containment structures such as perimeter berms or drains. The Process Wastewater Discharge Area is shown on the Facility Site Plan included as Attachment A of this Order. A detailed site plan showing all vines included in the Process Wastewater Discharge Area and the entire irrigation pipe network used for discharges of treated process wastewater will be provided as part of As-Built plans required by this Order.

**36. Process Wastewater Discharges.**

**a. Discharge System.** Treated process wastewater (pond effluent) is discharged to land through an above ground drip irrigation system within existing vineyards in the Process Wastewater Discharge Area. The Process Wastewater Discharge Area is 51,000 square feet in area. The drip irrigation system used for discharges of process wastewater will be independent of, i.e., not connected to, any other vineyard irrigation system. All parts of the irrigation system pipe network (e.g., drip system pipes, valves, tubes, emitters) will be clearly identified in the field by appropriate labels or color coded markings and notification signs posted at the perimeter of the discharge area.

**b. Discharge Schedule.** The ROWD identifies that discharges will occur in spring and autumn. The specific discharge schedule is dependent in part on rainfall, in terms of discharging only during dry weather conditions, and the total pond water balance, which is affected by rainfall accumulation there. During an average rainfall year, discharges are anticipated to occur in March, and October and November. During a heavy rainfall year, discharges are anticipated to occur in March April and May, and October and November. Discharges are governed in part by the pond management objective of drawing down the pond to its minimum operating water depth, and thus maximum available storage capacity, by October, in preparation for the wet weather season. Discharges will not occur during rainfall, during winter months, or when soils are saturated. The ROWD includes water balance evaluations of the pond and discharge operations illustrating the feasibility of acceptable operations for both average and 10-year return period wet weather seasons (30 and 42 inches of annual rainfall, respectively).

**c. Discharge Quantity.** Anticipated discharges to land are: (1) For a year with average precipitation: annual total discharge = 27,000 gpy; peak monthly discharge = 20,000 gallons per month with associated land application peak hydraulic load = 561 gpd/acre; and (2) For a year with 10-year precipitation: annual total discharge = 91,000 gpy; peak monthly discharge = 23,000 gallons per month with associated land application peak hydraulic load = 646 gpd/acre. Wastewater flow authorized by this Order for discharges to process wastewater discharge area is: Maximum hydraulic loading rate = 650 gallons per day per acre, and maximum vineyard irrigation application rate of 0.85 inches per month.

**37. Process Wastewater System Tanks.** The Process Wastewater System includes multiple tanks, used for collection, treatment and pumping of wastewater, as noted in the above descriptions. All tanks will be tested and verified to be water-tight as part of the new system construction. All tanks will be inspected at least annually for solids accumulation and general condition, and serviced as necessary including removal of accumulated solids, to maintain the tanks in proper operating condition. A summary of tank characteristics is given below:

| Unit # | Name                   | Capacity (gallons) |           | Dimensions (feet, inches) |       |       | Age (years) | Compartments |
|--------|------------------------|--------------------|-----------|---------------------------|-------|-------|-------------|--------------|
|        |                        | Total              | Operating | Length                    | Width | Depth |             |              |
| PW2    | Collection Catch Basin | **                 | **        | **                        | **    | **    | **          | 1            |
| PW3    | Cosentino Lift Station | 1770               | 1600      | 9' 0"                     | 5'7"  | 4'8"  | 10          | 1            |

\*\* = data not reported in ROWD. Data to be provided with system As-Built Plans.

**38. System Construction and Start-Up.** The new wastewater systems were anticipated to be constructed in 2006. As of adoption of this Order, the systems have not been constructed, and the facility is currently served by a temporary wastewater system. With the temporary system, all wastewater generated by Cosentino Winery is collected and stored in two temporarily-placed 4,000 gallon tanks on the facility site, and periodically removed by pump truck for haul-away and disposal to an authorized point of disposal (typically, East Bay Municipal Utility District's wastewater treatment plant). This temporary system is in use to accommodate construction of the new wastewater systems, and will be properly discontinued in association with start-up of the new systems. Construction completion and system start-up are anticipated to occur within the next six months.

**Wastewater Solids**

**39. Tank Solids Management.** All septic tanks and pump tanks will be inspected annually to assess accumulated solids, and serviced as necessary by removal of solids by licensed waste haulers. Solids are removed by pump truck and hauled away for off-site disposal at an authorized disposal facility.

**Monitoring**

**40. Wastewater Monitoring.** Wastewater quantity and quality are monitored at various points throughout the wastewater systems, in order to assure proper operation and performance of the systems and to document compliance with these requirements. Wastewater flows are monitored for the following: total process and sanitary wastewater generated by the Cosentino Winery facility; flows into and out of the treatment units; daily, monthly and annual totals of treated wastewaters discharged to land; and volumes of all wastewater and solids removed by pump truck for offsite disposal (e.g., septic tank servicing). Wastewater quality is monitored by sampling and analyses of treatment unit influents and effluents, water within the process wastewater pond; and final treated wastewater prior to discharges to land.

**41. Groundwater Monitoring.** The subject wastewater system involves discharges of waste to land. Groundwater in the vicinity of the discharges is actively used for domestic and commercial water supply. In order to ensure that the discharges do not result in adverse impacts to beneficial uses of groundwater resources, this Order requires the Discharger to implement a program of groundwater monitoring.

**a. Previous Groundwater Monitoring.** Requirements for groundwater monitoring were included in the September 28, 2001 Revised Self-Monitoring Program (RSMP) authorized by the Executive Officer for the old wastewater system. In November 2001, four monitoring wells were installed and sampling initiated. The discharge area of the old system was on the Mustards Grill property, and three of four monitoring wells are located on Mustards Grill property. The fourth well, identified as GW4, was located on Cosentino Winery property in the vineyard near the north corner of the wastewater pond. In November 2002, this well was found damaged by vehicles and unusable, and was replaced in January

2003 by well GW-4A in an area away from vehicles, near the south corner of the pond berm. The new well was constructed of 2-inch diameter PVC casing, screened with 0.01 inch slots at depths of 15 to 30 feet below ground surface (fbgs) with a two-foot bentonite seal and remaining annular space filled with cement slurry to surface, and total well depth of 30 fbgs. This well is currently still in use.

**b. Groundwater Monitoring Program - Future.** This Order requires the following: groundwater monitoring in the vicinity of the discharges regulated by this Order, by means of at least four adequately located and constructed monitoring wells, with at least one up-gradient and at least three down-gradient of the wastewater discharge areas; the Discharger to prepare and submit a Groundwater Monitoring Program Report that includes recommendations for locations and construction specifications of groundwater monitoring wells that will be suitable for this purpose; and implementation of groundwater monitoring within 60 days following approval of the report by the Executive Officer. The Self-Monitoring Program for this Order includes specifications for groundwater monitoring parameters and frequencies, and reporting requirements, and allows for modification of those requirements by the Executive Officer, as may be necessary or appropriate with respect to the Groundwater Monitoring Program Report or other new information about groundwater monitoring related to the discharges.

### Operation and Maintenance

**42. Operation and Maintenance Program.** An Operation and Maintenance (O&M) Program is needed in order to ensure that all aspects of the wastewater system are properly operated and maintained. The O&M Program must include descriptions of all wastewater system components and equipment, accurately dimensioned site plans identifying the locations of all components and relevant site features (buildings, wells, drainage ways, roads, etc.), recommended strategies and procedures for system operations in accordance with system designs and discharge requirements, procedures and criteria for process control monitoring, maintenance activities necessary to ensure continuous proper operation of the wastewater system, and identification of persons responsible for operation and maintenance of the wastewater system and how these persons can be contacted. This Order requires development and implementation of an O&M Program acceptable to the Executive Officer and preparation and submittal of an O&M Manual that fully describes the O&M Program.

**43. Operation and Maintenance Providers.** The wastewater system is managed by operators under contract to the Discharger. This Order requires the wastewater system to be operated and maintained by certified wastewater treatment plant operators that are experienced and knowledgeable of the wastewater system design and proper operation, or other similarly qualified and licensed persons. This Order requires the Discharger to establish and maintain a valid contract with a qualified service provider for operation and maintenance of the wastewater system.

### Storm Water

**44. Storm Water Permit Coverage for Storm Water Discharges.**

**a.** The Discharger has obtained permit coverage for discharges of storm water from the winery facility under National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000001, *Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities, State Water Resources Control Board (State Water Board) Water Quality Order No. 97-03-DWQ* (Industrial Storm Water Permit). The Discharger submitted a Notice of Intent (NOI) dated October 19, 1999. The Waste Discharger Identification number is 2\_28I015439.

**b.** The ROWD identifies that a Storm Water Pollution Prevention Plan (SWPPP) was prepared in July 2001 for the Cosentino Winery facility's storm water runoff, and that storm water at the facility is

managed in accordance with the SWPPP. The ROWD also identifies that storm water management during operation of the proposed wastewater systems will be in accordance with an updated SWPPP and Storm Water Management and Monitoring Plan (SWMMP) that will be prepared by Cosentino Winery LLC, and that will be in accordance with the requirements of the Industrial Storm Water Permit. The updated SWPPP and SWMMP have not yet been received by the Board.

- c. This Order requires submittal of an updated SWPPP and SWMMP that reflect updated facility conditions (i.e., with the completed new wastewater systems) and storm water management practices relevant to the updated conditions including storm water discharges from all wastewater system areas, implementation of the SWPPP and SWMMP, and periodic review and updating as necessary to remain current and applicable to the wastewater systems and their operations.

### Other Information

45. **Solid Waste.** Solid waste produced at the facility is temporarily stored on-site in approved waste containment bins, and periodically removed by an authorized solid waste hauler and taken to a sanitary landfill for disposal. Disposal of solid waste on the Discharger's property is not authorized by this Order.
46. **Adjacent Land Uses - East.** East of the Discharger's property is State Highway 29, also known as St. Helena Highway, with land uses beyond the highway identified by Napa County as large lot agricultural and residential parcels.
47. **Adjacent Land Uses - North.**
  - a. North of the Discharger's property are land uses identified by Napa County as small lot residential parcels. Parcels immediately adjacent, from east to west, are: (1) APN 27-540-12, (2) APN 27-540-10, and (3) APN 27-540-07 (Sites 1, 2 and 3 respectively). A 52-foot wide right-of-way easement exists on the Discharger's property, extending from the north boundary, and from Highway 29 southwestward for the length of the boundaries with Sites 1 and 2, ending in a 100-foot radius cul-de-sac. One purpose of this easement is to allow access between Highway 29 and Site 2.

For Site (1), land use is a bed and breakfast facility and notable features include: a mound system on-site wastewater treatment system (OWTS) in the front yard. For Site (2), land use is a private residence and notable features include: a house located about 150 feet northwest of the Cosentino Winery building; a conventional trench-type OWTS in the back yard; three domestic water supply wells, one located beneath the house, about 160 feet northwest of the winery building, one located beneath a shed about 100 feet northwest of the winery building, and one located near the south west corner of the parcel, about 150 feet west of the winery building and about 10 feet from the Discharger's "West Vineyard"; the home's back yard is north of, adjacent to, and down-slope from the "West Vineyard". For Site (3), land use is a \*private residence, and notable features include: a domestic water supply well near the southwest corner of the parcel, within 30 feet of the north edge of the "West Vineyard"; a conventional trench-type OWTS in the backyard; and this parcel is down-slope from the northwest section of the "West Vineyard".

- b. Issues of concern for these land uses with respect to the subject discharges include: Proximity of the discharges to domestic water supply wells on Sites 2 and 3; and potential runoff from the process wastewater discharge area onto Sites 2 or 3. This Order includes requirements to address these concerns, including: (a) all discharges of treated wastewater to land that are part of the Discharger's wastewater system must be located at least 100 feet horizontal distance from any domestic water supply well; and (b) potential runoff from the process wastewater discharge area shall be controlled by installation of physical features such as berms or drains along all down-slope perimeters of either the discharge area or the facility site property boundary abutting these parcels, suitable for excluding any such runoff from those properties, and from within 100 feet of the domestic water supply wells on those properties. This Order

also requires a program of groundwater monitoring in the vicinity of the discharges to assure that beneficial uses of groundwater are not adversely impacted by the discharges.

- 48. Adjacent Land Uses - West.** West/southwest of the Discharger's property is a railroad right-of-way and tracks which abut the Discharger's property. The railroad is currently used by the Napa Valley Wine Train as a tourist excursion train through the Napa Valley, which makes several trips per day. Beyond the railroad right-of-way and tracks are land uses identified by Napa County as large lot agricultural/residential parcels. The parcel immediately beyond the railroad is a private residence with wine grape vineyards near the railroad, and beyond those, a residential home and barn. This residence is served by two actively used domestic water supply wells located near the house and barn. The wells are about 500 feet southwest from the Cosentino Winery wastewater pond.
- 49. Adjacent Land Uses - South.** South of the Discharger's property is the parcel on which Mustards Grill restaurant and the wastewater system serving Mustards Grill are located. There are no water supply wells located there.

### **Basis of Requirements**

- 50. Basin Plan.** The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on January 21, 2004. This updated and consolidated plan is the Board's master water quality control planning document. The revised Basin Plan was approved by the State Water Resources Control Board (State Board) and the Office of Administrative Law on July 22 and October 4, 2004, respectively, and approved by the U.S. Environmental Protection Agency, Region IX on January 5, 2005.
- 51. Basin Plan Implementation.** The Basin Plan contains water quality objectives and beneficial uses for waters of the State within the San Francisco Bay Region, and an Implementation Plan. This Order implements the objectives and provisions of the Basin Plan. This Order includes effluent limits and discharge requirements intended to protect existing and potential beneficial uses of waters of the State, as well as to protect public health and the environment.
- 52. Beneficial Uses.** The beneficial uses of waters of the State identified in the Basin Plan for waters in the vicinity of the subject wastewater system include the following:
- a. Surface Water.** Beneficial uses of surface water in the Napa River and tributaries include:
    - 1. Navigation
    - 2. Water contact and non-contact recreation
    - 3. Warm and cold fresh water habitat
    - 4. Wildlife habitat
    - 5. Preservation of rare and endangered species
    - 6. Fish migration and spawning
    - 7. Municipal, agricultural, and domestic supply
  - b. Groundwater.** Beneficial uses of groundwater in the Napa Valley include:
    - 1. Domestic water supply
    - 2. Agricultural water supply

### **California Environmental Quality Act (CEQA)**

- 53. CEQA - Past Actions.** On June 3, 1987 the Napa County Conservation, Development and Planning Commission (NCCDPC) adopted a Negative Declaration for the proposed Crystal Valley Cellars (now

Cosentino Winery) winery facility and the associated proposed wastewater pond system. The Negative Declaration found that the proposed project would not have a significant effect on the environment. The project was subsequently modified to include the Mustards Grill restaurant and wastewater facilities for both the winery and the restaurant. On March 22, 1989, the NCCDPC approved a Use Permit for the modified wastewater system project, and a finding that the project is categorically exempt from the California Environmental Quality Act, pursuant to Section 15302 of the California Code of Regulations (Class 2 Categorical Exemption - Replacement or Reconstruction of Existing Facilities).

- 54. CEQA - Recent Actions.** On July 6, 2005, the NCCDPC approved a Negative Declaration for the proposed project to dismantle parts of the existing joint wastewater system used by Cosentino Winery and Mustards Gill, and establish a new independent wastewater system for Cosentino Winery consisting of separate sanitary and winery process wastewater treatment and disposal systems, and to refurbish the existing wastewater pond on Cosentino Winery property (Cosentino Winery Use Permit (#03474-UP) Negative Declaration). The Negative Declaration includes mitigation measures and determination that, with incorporation of those measures, the project will not have a significant effect on the environment. A Notice of Determination, dated July 29, 2005, was filed by NCCDP Department (State Clearinghouse Number 2005062011). The Board has considered the Negative Declaration and finds that the project as mitigated will not have a significant effect on the environment.

#### **Public Notice and Hearing**

- 55. Public Notice.** The Board has notified the Discharger and interested persons of its intent to prescribe waste discharge requirements for the subject wastewater system and discharges and has provided them with an opportunity for a public hearing and to submit written views and recommendations.
- 56. Public Hearing.** The Board, in a properly noticed public hearing, heard and considered all comments pertaining to these waste discharge requirements.

**IT IS HEREBY ORDERED**, that the Discharger, pursuant to the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

#### **A. PROHIBITIONS**

1. The treatment, storage, or discharge of wastes shall not create a nuisance or pollution as defined in the California Water Code.
2. Discharges of waste into or from the wastewater systems other than as described in and authorized by this Order are prohibited.
3. There shall be no bypass or overflow of waste to waters of the State from the Discharger's wastewater collection, treatment, storage or disposal facilities.
4. The discharge of waste shall not degrade the quality of any groundwater used for domestic purposes or cause an increase in any quality parameter that would make groundwater unsuitable for irrigation use.
5. Discharges of wastewater to the wastewater systems in excess of the operating hydraulic capacity or organic loading treatment capacity of each respective system are prohibited.
6. For discharges of storm water from the facility site, discharges of any material other than uncontaminated storm water to waters of the state are prohibited.

## B. DISCHARGE SPECIFICATIONS

1. **Source Wastewaters.** Wastewater authorized by this Order to be discharged into the wastewater systems consists of the following:
  - a. For the Sanitary Wastewater System, wastewater from employee and visitor uses of and at the sources and plumbing fixtures located in the Cosentino Winery facility building, as described in the findings of this Order, and in accordance with facility uses permitted by Napa County Use Permit.
  - b. For the Process Wastewater System, winery process wastewater from wine making and processing activities conducted at and by the Cosentino Winery facility as described in the findings of this Order, and in accordance with facility uses permitted by Napa County Use Permit.
  
2. **Authorized Wastewater Flows - Sanitary Wastewater System.**
  - a. **Annual Flow.** Discharges into the Sanitary Wastewater System shall not exceed the design annual total flow rate of 100,000 gallons per year.
  - b. **Peak Daily Flow.** Discharges into the Sanitary Wastewater System shall not exceed the design peak daily flow rate of 1,000 gallons per day (gpd).
  - c. **Discharge System.** Discharges to the Sanitary Wastewater Discharge System shall not exceed the design flow rate of 430 gpd.
  
3. **Authorized Wastewater Flows - Process Wastewater System.**
  - a. **Annual Flow.** Discharges into the Process Wastewater System shall not exceed the design annual total flow rate of 250,000 gallons per year.
  - b. **Peak Daily Flow.** Discharges into the Process Wastewater System shall not exceed the design peak daily flow rates of: 4,000 gpd during crush season, nor 2,000 gpd during non-crush season.
  - c. **Discharge System.** Discharges to the Process Wastewater Discharge Area shall not exceed the design maximum hydraulic loading rate of 650 gpd per acre, and shall not exceed a maximum vineyard irrigation rate of 0.85 inches per month.
  
4. **Discharge Effluent Limits - Sanitary Wastewater System.** Treated sanitary wastewater discharged to the Sanitary Wastewater Discharge System shall comply with the following quality limits:
  - a. Biochemical Oxidation Demand      30.0 mg/L, maximum;
  - b. Total Suspended Solids                30.0 mg/L, maximum;
  - c. Total Nitrogen                            20.0 mg/L as N, maximum; and
  - d. Total Coliform                            230 MPN/100 ml, maximum.
  
5. **Discharge Effluent Limits - Process Wastewater System.** Treated process wastewater discharged to the Process Wastewater Discharge Area shall comply with the following quality limits:
  - a. Biochemical Oxidation Demand      40.0 mg/L, maximum;
  - b. Total Suspended Solids                40.0 mg/L, maximum; and
  - c. Total Nitrogen                            10.0 mg/L as N, maximum.
  
6. **Discharge Discontinuation.** Discharges of treated wastewater to the discharge areas shall be ceased during any period when the respective limits specified in B.4 or B.5 above are not met. The discharges shall not resume until all conditions which caused the specified limits to be violated have been corrected.

**7. Wastewater System Operation and Maintenance.**

- a. The wastewater system shall be constructed as described in this Order and in the Report of Waste Discharge, and in accordance with all requirements of this Order.
- b. The Discharger shall operate and maintain the wastewater systems as efficiently as possible, and shall maintain in good working order all wastewater system components, equipment and control systems installed to achieve compliance with this Order.
- c. The wastewater system shall be operated and maintained in accordance with the requirements of this Order and with the procedures identified in the Operations and Maintenance (O & M) Manual required by this Order.

**8. Pump Stations.**

- a. All pump stations shall be designed, constructed, operated and maintained to prevent the occurrence of spills or overflows resulting from mechanical breakdown or power failure.
- b. All pump stations shall be equipped with reserve hydraulic capacity sufficient to provide storage of wastewater during a pump failure condition for at least 24 hours, and water level monitoring and alarm system(s) to provide notification of high water level conditions.
- c. The alarm system shall include audible and visual alarms sufficient to notify operating personnel of an alarm condition. If operating personnel are not present at the facility site, the alarm system shall include an automated telephone dialer system capable of notifying on-call operating personnel of the alarm condition.
- d. The power supply for alarm systems shall be independent of the normal power supply for the wastewater system.

**9. Pond Water Quality.** Water near the surface of the pond shall meet the following quality limits at all times:

| <u>Parameter</u>     | <u>Limit</u>                     |
|----------------------|----------------------------------|
| a. Dissolved Oxygen  | 2.0 mg/l, minimum                |
| b. Dissolved Sulfide | 0.1 mg/l, maximum                |
| c. pH                | 6.0, minimum, and 9.0, maximum * |

\* Note: Diurnal variations of pond water pH beyond these limits due to ordinary diurnal fluctuations pond biological activity are expected and are not violations of these limits.

**10. Pond Freeboard.** To prevent the threat of overflows, a minimum freeboard of two (2) feet shall be maintained in the pond at all times, except during periods of rainfall that exceed the design ten-year return period rainfall (42 inches per year). During any time when the freeboard level is less than two feet, all discharges of wastewater into the pond shall be discontinued. During any time when the freeboard level is one foot or less, the Discharger shall implement removal of water from the pond by pump truck for haul away to a legal point of disposal and continue such removal until a freeboard level of at least two feet is regained and maintained.

**11. Pond Aeration.**

- a. **Aerators.** Each zone of the pond shall be equipped with one or more functioning aerators sufficient to provide sufficient aeration capacity to achieve design aerobic biological stabilization of the wastewater contained therein, and to prevent the creation of nuisance odors or anaerobic conditions.
- b. **Aerator Operation.** The aerators shall be operated a sufficient amount of time each day to ensure that the criteria described in a above are achieved, at all times.

**12. Pond Containment Impermeability.** The pond containment structure shall be constructed and maintained, by lining or adequate compaction of suitable soil, such that permeability of the liquid containment structure is not more than  $1 \times 10^{-6}$  centimeters per second (cm/sec).

- 13. Pond Flood Protection.** The pond shall be adequately protected from erosion, washout, and flooding from a rainfall event having a predicted frequency of once in 100 years.
- 14. Pond Fencing.** The perimeter of the wastewater pond shall be adequately fenced in order to restrict public access.
- 15. Warning Signs - Pond and Process Wastewater Discharge Area.** Warning signs shall be posted around the pond, and around the Process Wastewater Discharge Area, informing all persons that may be present in these areas that the water contained therein is wastewater and is not safe for drinking. Signs shall be of sufficient size and proper wording to be clearly read. The signs shall be posted at access gates, commonly used access ways such as roads or paths, and along each linear perimeter of the pond and along each liner perimeter of the discharge area.
- 16. Pipe Separations.**
  - a. There shall be no cross-connection between potable domestic water supply pipes and pipes containing treated wastewater.
  - b. There shall be at least a 10 foot horizontal and a one foot vertical separation between all pipes transporting wastewater and pipes transporting potable domestic water, with the potable domestic water pipes above the wastewater pipes.
  - c. All distribution pipe networks installed and used for distribution and dispersal of treated wastewater to and throughout the wastewater discharge systems, including rigid and flexible pipes, tubing, emitters and any other components shall be independent of any distribution pipe networks containing water used for domestic water supply or used for distribution or dispersal of water to land areas, vegetation or any other end use outside of the designated wastewater discharge area.
- 17. Wastewater Use.** Treated wastewater shall not be used as a domestic or animal water supply.
- 18. Discharge Area Separation from Wells.** The wastewater discharge areas shall be designed, constructed and maintained such that a horizontal separation distance of at least 100 feet is maintained between all domestic water supply wells and the nearest point of any wastewater discharge.
- 19. Process Wastewater Discharges.**

Discharges of process wastewater to the Process Wastewater Discharge Area shall not occur during rainfall, whenever there is ponded standing water present, whenever soils are saturated, or whenever conditions are such that ponding or runoff is likely to occur.
- 20. Process Wastewater Discharge Area Runoff.**

The Process Wastewater Discharge Area shall be equipped with runoff control features such as berms or drains along all down-slope perimeters of either the discharge area or nearby down-slope areas suitable for controlling any runoff from the discharge area in order to prevent such runoff from entering onto the adjacent property parcels, and from entering within 100 feet of any domestic water supply well unless completely contained within watertight pipe.
- 21. Storm Water Discharges.** All discharges of storm water from the facility site shall be managed in compliance with the requirements of the Industrial Storm Water Permit, and in accordance with the approved SWPPP and SWMMP for the facility as required by the Industrial Storm Water Permit and in accordance with the requirements of this Order.

**22. Wastewater Solids.** All solid materials removed from the liquid waste stream of the wastewater systems, shall be disposed of at a legal point of disposal, and in accordance with the provisions of Title 27 of the California Code of Regulations. This includes solids accumulated in septic tanks, pump tanks, filters or other components of the wastewater systems. For the purpose of this requirement, a legal point of disposal is defined as a facility for which waste discharge requirements have been prescribed or waived by a Regional Water Board and which facility is in full compliance therewith. This Order does not authorize disposal of wastewater solids, anywhere on the facility site.

### C. PROVISIONS

**1. Order Compliance.** The Discharger shall comply with all sections of this Order immediately upon adoption.

**2. Self-Monitoring Program.** The Discharger shall comply with the Self-Monitoring Program for this Order as adopted by the Board and as may be amended by the Executive Officer.

**3. Design Plans of Constructed Wastewater Systems.**

**a.** The Discharger shall submit to the Board a technical report, acceptable to the Executive Officer, no later than 30 calendar days from the date of adoption of this Order, comprised of final design plans for the constructed systems, including "As-Built" drawings, and narrative descriptions as appropriate, of the completed-to-date wastewater treatment and discharge systems.

**b.** This report shall include, but shall not be limited to, the following:

- (1) For all tanks, complete tank specifications (e.g., location, material, total and operating capacities, dimensions, age, number of compartments, access openings, risers and riser lids), and results of watertight verification tests;
- (2) For the Process Wastewater System, specific identification of the exact boundaries of, all vines that are included in, and all parts of the entire drip irrigation system pipe network that are part of, the Process Wastewater Discharge Area, and a detailed site plan showing the locations of all of these elements;
- (3) For the Process Wastewater System, updated water balance evaluations of the pond and discharge operations illustrating planned operations for both average and 10-year return period wet weather, incorporating the dimensions and capacities of the final-design wastewater system; and
- (4) For the Process Wastewater Discharge Area, all equipment or features, installed or planned, to control runoff in accordance with Discharge Specification B.20 of this Order.

**c.** If the wastewater system is not yet completed, and further construction or modifications are in progress or planned, then (1) the report shall be comprised of as-built plans for those components completed, and a complete description of construction or modifications in progress or planned, and a time schedule for completion of those actions; and (2) a complete set of plans for the entire completed system(s) shall be submitted within 30 days of system completion.

**d.** All plan drawings shall be of scale at least one inch equals 40 feet, properly labeled, and legible.

**4. Design Plans of Future Wastewater System Changes.** In the event of any changes to wastewater system components in the future, updated as-built plans of the portion of the system(s) affected by such changes shall be submitted to the Board within 30 days of completion of those changes.

**5. Operation and Maintenance Providers.**

- a. The wastewater systems shall be operated and maintained by persons that are experienced in, and knowledgeable of, proper wastewater treatment and disposal practices. Such persons shall be wastewater treatment plant operators possessing a current and valid certification from the State of California, or other persons with similar knowledge and experience and valid professional registration or license.
- b. The Discharger shall establish and maintain a valid contract, or contracts, with a qualified service provider, or qualified service providers, for operation and maintenance of the wastewater systems.
- c. The Discharger shall submit to the Board, within 30 days of adoption of this Order, copies of completed service contracts with qualified service providers for operation and maintenance of the wastewater systems.
- d. In the event of any changes in contracted service providers, the Discharger shall notify the Board in writing of such changes prior to the effective date of such changes, and submit copies of the new or revised contracts within ten working days from the effective date of those changes.

**6. Operation and Maintenance Program.** The Discharger shall develop and implement an Operations and Maintenance (O & M) Program for the wastewater system, in accordance with the following:

- a. **O & M Program.** The O & M Program shall include all procedures necessary to properly operate the wastewater system in accordance with design parameters, to achieve compliance with waste discharge requirements, and to maintain the system in good working condition.
- b. **O & M Manual.** The O & M Program shall include an O & M Manual documenting all aspects of the program. The O&M Manual shall include, but not be limited to, the following:
  - 1) Description of the overall wastewater system;
  - 2) Scaled plan drawings of the wastewater system, including pipes, valves and control equipment;
  - 3) Description of the wastewater flow through the system, from sources to final disposal;
  - 4) Descriptions and specifications of all system components and equipment;
  - 5) Routine procedures for operation of the wastewater system including grease traps, septic tanks, pumps, and the subsurface drip dispersal system;
  - 6) Routine procedures for management and disposal of wastewater solids removed from the wastewater streams;
  - 7) Procedures for maintenance of all system components;
  - 8) Procedures for operation of the wastewater system during emergency conditions such as power outage, major equipment failure, extreme wet weather conditions or other emergencies; and
  - 9) Copies of all applicable regulatory permits for the wastewater system, or specific references of those permits and identification of a location at the facility where those permit are available for review and reference by operating personnel, other service providers, or regulatory agency staff.
- c. **O & M Manual Submittal.** The Discharger shall submit to the Board a technical report, acceptable to the Executive Officer, 30 days prior to the first day of wastewater system operation, comprised of a complete copy of the O & M Manual, identification of person(s) responsible for implementation of the O & M Program, and contact information for those persons.
- d. **O & M Manual Review and Updates.** The Discharger shall periodically review and update as necessary the O & M Manual in order to ensure that the manual remains current and applicable to the wastewater systems and their proper operation.
- e. **O & M Manual Review and Update Reports.** Annually, the Discharger shall submit a report to the Board containing any revisions or updates of the O & M Manual that have been made, or a letter stating that the O & M Manual remains adequate and no revisions are necessary. This report shall be submitted as part of the Annual Monitoring Report.

**7. Groundwater Monitoring Program.**

- a. Groundwater Monitoring Program.** In order to ensure compliance with Discharge Prohibition A.4 of this Order, the Discharger shall implement a program of groundwater monitoring in the vicinity of the discharges, i.e., in the vicinity of the wastewater discharge areas.
- b. Groundwater Monitoring Program Components.** This program shall include characterization of discharge area soils, groundwater levels, movement and quality, and evaluation of any changes in groundwater characteristics that may be attributable to the wastewater discharges. Potential changes to be addressed and evaluated include localized increase in groundwater level (groundwater mounding effects), increase in the concentration of constituents of concern in the groundwater, and migration of nitrate or other wastewater constituents into the groundwater or offsite to existing or potential points of use. This program shall include measurement of groundwater levels and sampling of groundwater for analytical characterization by means of at least four adequately located and constructed groundwater monitoring wells, with at least one well located up-gradient and at least three wells located down-gradient of the wastewater discharge areas.
- c. Groundwater Monitoring Program Report.** The Discharger shall submit to the Board a technical report, acceptable to the Executive Officer, no later than 60 calendar days from the date of adoption of this Order, comprised of the following: Identification of the locations of all wastewater discharges on the site; description of site soils and groundwater in the vicinity of the discharges, based on currently available information; and recommendations for location and construction specifications of the monitoring wells. Proposed monitoring well locations shall be shown on a legible, scaled, topographic map of the facility site.
- d. Groundwater Monitoring Program Initiation.** The Discharger shall initiate the groundwater monitoring program no later than 60 calendar days from the date of approval by the Executive Officer of the Groundwater Monitoring Program Report identified in c above.
- e. Groundwater Monitoring and Reporting.** The Self-Monitoring Program of this Order includes requirements for groundwater monitoring including monitoring parameters and frequencies, and requirements for reporting of groundwater monitoring results. The Discharger shall comply with those monitoring and reporting requirements upon initiation of program implementation, and any modifications to those requirements specified in writing by the Executive Officer, such as may be necessary in response to the technical report required above, or other new information about groundwater or groundwater monitoring related to the subject wastewater system and discharges.

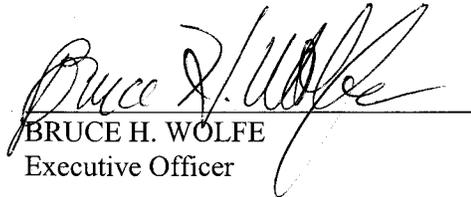
**8. Storm Water Discharge Management.**

- a. Updated SWPPP and SWMMP.** The Discharger shall submit to the Board a technical report, acceptable to the Executive Officer, no later than 30 calendar days from the date of adoption of this Order, comprised of an updated SWPPP and SWMMP that reflect updated facility conditions (i.e., with the completed new wastewater systems) and storm water management practices relevant to the updated conditions including storm water discharges from all wastewater system areas.
- b. Implementation.** The Discharger shall implement the approved SWPPP and SWMMP.
- c. Review and Update.** The Discharger shall periodically review, and update as necessary, the SWPPP and SWMMP, so that these Plans remain current and applicable to current conditions of the facility site and the wastewater systems, and current wastewater system operations.
- d. Review and Update Reports.** Annually, the Discharger shall submit a report to the Board containing any revisions or updates of the SWPPP or SWMMP that have been made, or a notification stating that the SWPPP and SWMMP remain adequate and no revisions are necessary. This report shall be submitted as part of the Annual Monitoring Report.

- 9. Non-Compliance Reporting.** In the event the Discharger is unable to comply with any of the conditions of this Order due to:
- Breakdown of wastewater transport or treatment equipment;
  - Accidents caused by human error or negligence; or
  - Other causes such as acts of nature,
- the Discharger shall notify the Board by telephone as soon as the Discharger or the Discharger's agents have knowledge of the incident. Written confirmation of this notification shall be submitted within five working days of the telephone notification. The written notification shall include pertinent information explaining reasons for the non-compliance and shall indicate what steps were taken to correct the problem and the dates thereof, and what steps are being taken to prevent the problem from recurring.
- 10. Entry, Access and Inspection.** The Discharger shall permit the Board or its authorized representatives, in accordance with Section 13267(c) of the California Water Code:
- Entry upon premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order;
  - Access to and copy of, at reasonable times, any records required by conditions of this Order;
  - Inspection, at reasonable times, of any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; or
  - To photograph, sample or monitor, at reasonable times, for the purpose of assuring compliance with this Order.
- 11. Annual Fees.** The Discharger must pay annual fees in accordance with the fee schedule given in California Code of Regulations Title 23, Division 3, Chapter 9, Article 1, Section 2200 and annual fee invoices issued by the State Board. Annual fees for Waste Discharge Requirements are based on Threat to Water Quality and Complexity ratings. The current rating for this Order is 2 B. The current fee is \$5,720, plus a 9% Ambient Water Monitoring surcharge, for a total annual fee of \$6,235. This fee is subject to change, if the fee schedule of Title 23 Section 2200 is changed. Annual Fee invoices are issued each year by the State Board, for the state fiscal year (July 1 though June 30).
- 12. Change in Control or Ownership.** In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to this Board. The succeeding owner or operator, in order to obtain authorization for discharges regulated by this Order, must apply in writing to the Executive Officer, requesting transfer of the Order. This request must include complete identification of the new owner or operator, the reasons for the change, and effective date of the change. Discharges conducted without submittal of this request will be considered discharges without waste discharge requirements, violations of the California Water Code.
- 13. Report of Waste Discharge.** The Discharger shall file with the Board a Report of Waste Discharge at least 180 days before making any material change in the character, location, or volume of the discharges or discharge facilities as described in this Order, except for emergency conditions. In the event of changes implemented in response to emergency conditions, the Board shall be notified immediately by telephone, and in writing or by facsimile transmission within five calendar days of such changes.
- 14. Order Review and Update.** The Board will review this Order periodically and may revise the requirements as necessary to comply with changing State and Federal laws, regulations, policies, or guidelines; changes in this Board's Basin Plan; or changes in the discharge characteristics.

- 15. Order Termination.** After notice and public meeting, this Order may be terminated or modified by the Board for any reason.
- 16. Rescission of Previous Orders.** The waste discharge requirements prescribed by this Order supercede those prescribed by this Board's Order No. 89-072, for Cosentino Winery (previously known as, and cited in Order No. 89-072 as, Crystal Valley Cellars). Order No. 89-072 is no longer applicable to Cosentino Winery. Order No. 89-072 as it applies to Cosentino Winery is hereby rescinded. On October 11, 2006, the Board adopted Order No. R2-2006-0071, Waste Discharge Requirements for Mustards Grill, Cynthia Pawlcyn, and Mustards Grill Wastewater Treatment System, 7399 St. Helena Highway, Napa County, which superceded and rescinded Order No 89-072 as it applies to Mustards Grill. Order No. 89-072 is therefore no longer applicable nor in effect for either Cosentino Winery or for Mustards Grill, and is completely rescinded.

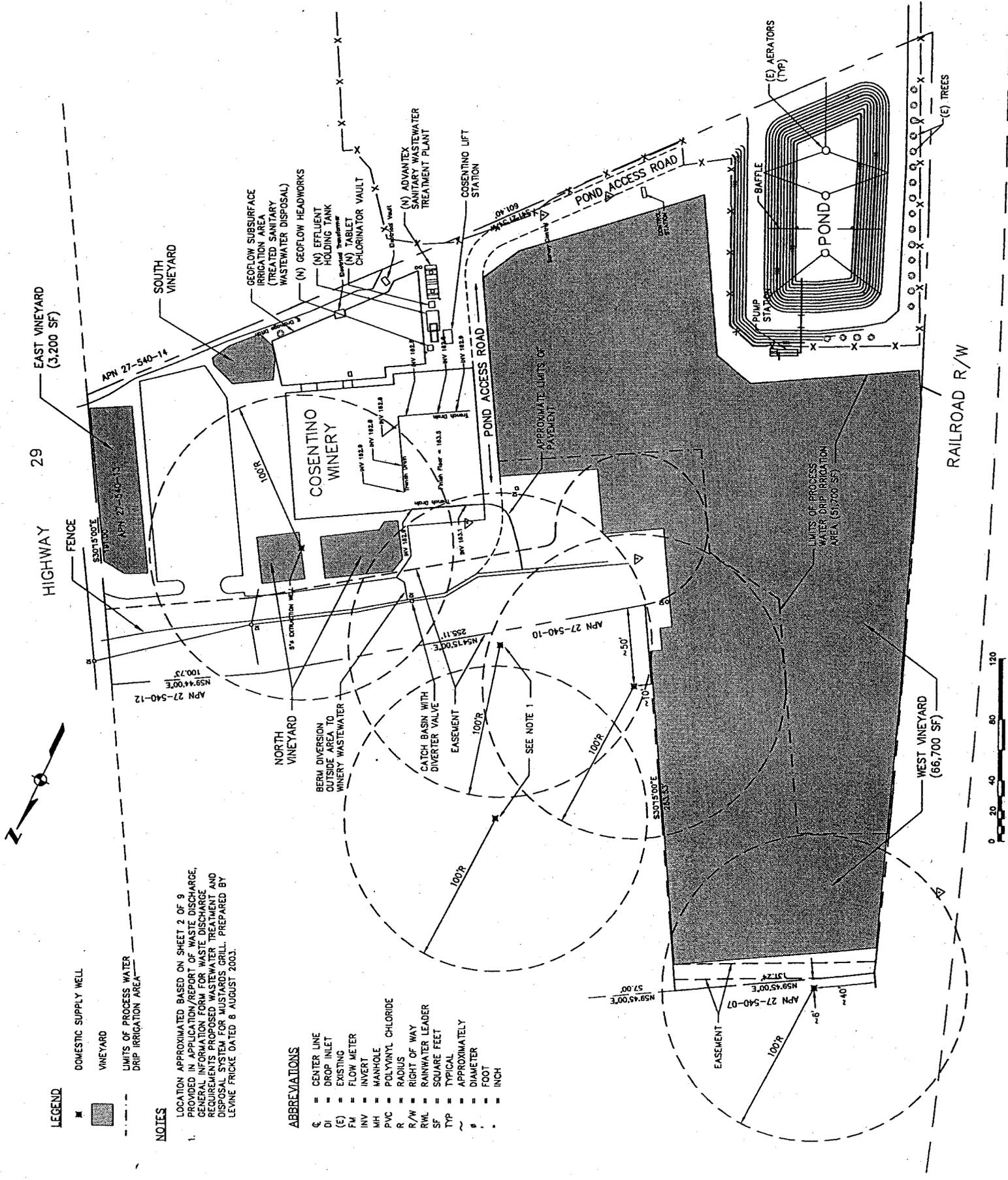
I, Bruce H. Wolfe, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on November 13, 2006.

  
BRUCE H. WOLFE  
Executive Officer

Attachments:

- A. Facility Site Plan
- B. Wastewater System Flow Schematic
- C. Wastewater System Design Criteria  
Self-Monitoring Program

[File No. 2139.3135]  
[WDID No. 2\_283135001]  
[Originator/BDA]  
[Reviewers/WBH, WKB]  
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**LEGEND**

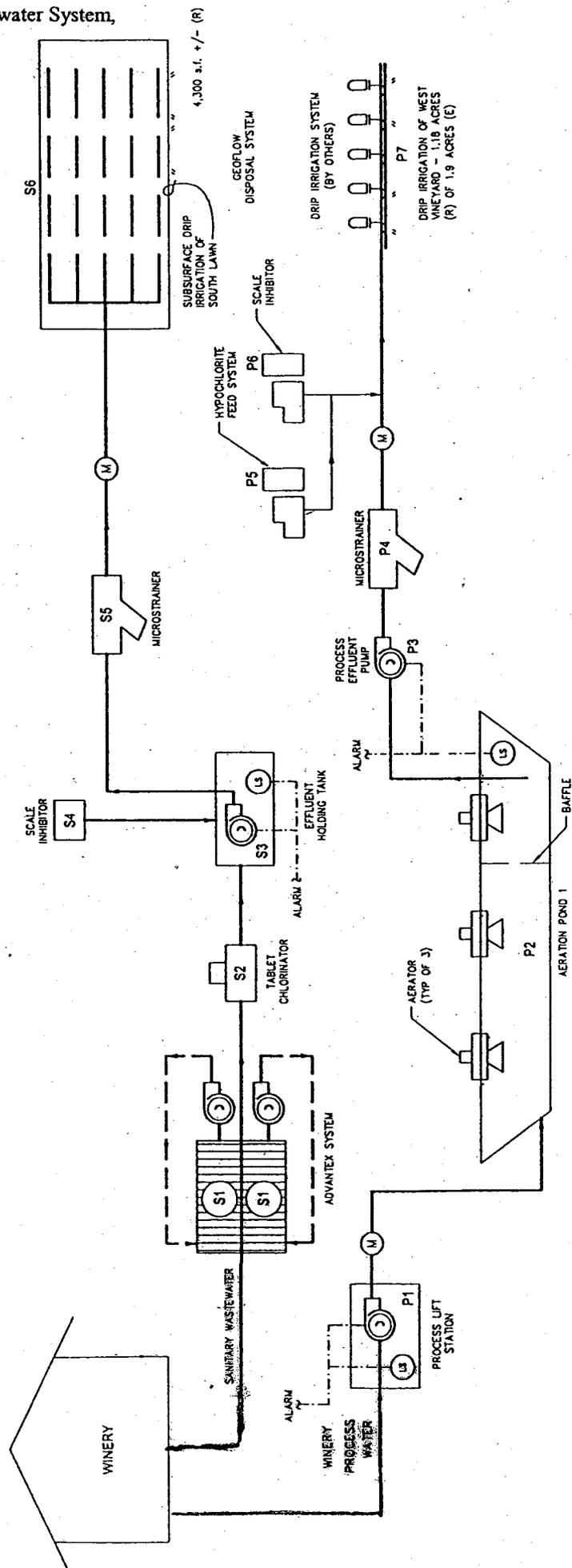
- DOMESTIC SUPPLY WELL
- VINEYARD
- - - LIMITS OF PROCESS WATER DRIP IRRIGATION AREA

**NOTES**

1. LOCATION APPROXIMATED BASED ON SHEET 2 OF 9 PROVIDED IN APPLICATION/REPORT OF WASTE DISCHARGE, GENERAL INFORMATION FORM FOR WASTE DISCHARGE REQUIREMENTS PROPOSED WASTEWATER TREATMENT AND DISPOSAL SYSTEM FOR MUSTARDS GRILL, PREPARED BY LEVINE FRICKE DATED 8 AUGUST 2003.

**ABBREVIATIONS**

- C = CENTER LINE
- DI = DROP INLET
- (E) = EXISTING
- FM = FLOW METER
- INV = INVERT
- MH = MANHOLE
- PVC = POLYVINYL CHLORIDE
- R = RADIUS
- R/W = RIGHT OF WAY
- RWL = RAINWATER LEADER
- SF = SQUARE FEET
- TYP = TYPICAL
- ~ = APPROXIMATELY
- = DIAMETER
- = FOOT
- = INCH



COSENTINO WINERY TREATMENT SYSTEM PROCESS FLOW DIAGRAM

**COSENTINO WINERY TREATMENT SYSTEM DESIGN CRITERIA**

**SANITARY WASTEWATER SYSTEM**

**FLOW RATE**  
Annual 100,000 gallons per year  
Peak 1,000 gallons per day  
Average 275 gallons per day

**DESIGN INFLUENT AND EFFLUENT CONCENTRATIONS**

|   | Influent                   | Effluent       |
|---|----------------------------|----------------|
| Biochemical Oxygen Demand (BOD <sub>5</sub> ) | 500 mg/l                   | <30 mg/l       |
| Total Suspended Solids (TSS)                  | 200 mg/l                   | <30 mg/l       |
| Nitrogen (N)                                  | 55 mg/l                    | <20 mg/l       |
| pH  | 7.5                        | 7.5            |
| Total Coliform                                | 10 <sup>7</sup> MPN/100 mL | 230 MPN/100 mL |

**ADVANTEK SYSTEM (N) (S1)**

Flow Rate (avg/max) 275 / 1,000 gallons per day  
**Filter Pads**  
Manufacturer Orenco AX20, 3,600 GPM System  
Number 4  
Size 7'-6" x 3'-3" x 2'-7" deep  
Capacity 250 gallons per day each  
Material Fiberglass  
**Processing/Recirculation Silt Tank**  
Number 1  
Type Dual Compartment  
Volume 5,000 gallons  
Size 18' x 10' x 9' deep  
Material Precast Concrete

**Sanitary Recirculation Pumps**  
Manufacturer  
Number 2  
Type Submersible  
Pump Capacity 51 gpm @ 22 ft. TDH  
Motor 3/4 hp

**TABLET CHLORINATOR (N) (S2)**

**EFFLUENT HOLDING TANK (N) (S3)**

Number 1  
Volume 3,000 gallons  
Size 13'-4" x 9'-4" x 7'-4" deep  
Location Buried  
Sanitary Effluent Pump

Location Effluent Holding Tank  
Number 2  
Type Submersible  
Capacity 38 gpm @ 77 ft. TDH  
Motor 1.5 hp

**SCALE INHIBITOR (N)(S4)**

Number 1  
Chemical Polyphosphate Blend  
Dosage 1 mg/l per 20 mg/l hardness  
Use 0.42 pounds per week at 10 mg/l  
Frequency Weekly or as needed  
Feed Method Manual Feed Into Effluent Tank

**MICROSTRAINER (N)(S5)**

Number 1  
Flow Rate 50 gallons per minute  $\Delta$   
Filter Size 80 microns

**DISPOSAL SYSTEM (N)(S6)**

Manufacturer Geoflow WasteFlow Drip System  
Flow Rate 430 gallons per day  
Loading Rate 0.1 gallons per day per square foot  
Pressure 20 psi  
Area 4,300 square feet  
**Manifolds**  
Size 2 inch diameter  
Type Schedule 40 PVC  
Cover 18 inches minimum  
**Driplines**  
Spacing 12 inches on center

**WINERY PROCESS WATER**

**FLOW RATE**  
Annual 250,000 gallons per year  
Peak  
Crush 4,000 gallons per day  
Non-Crush 2,000 gallons per day  
Average  
Crush 1,000 gallons per day  
Non-Crush 800 gallons per day

**DESIGN INFLUENT AND EFFLUENT CONCENTRATIONS**

|   | Influent   |            | Effluent |
|---|------------|------------|----------|
|   | Crush      | Non-Crush  |          |
| Biochemical Oxygen Demand (BOD <sub>5</sub> ) | 8,000 mg/l | 4,000 mg/l | <40 mg/l |
| Total Suspended Solids (TSS)                  | 500 mg/l   | 200 mg/l   | <40 mg/l |
| Nitrogen (N)                                  | 50 mg/l    | 20 mg/l    | <10 mg/l |
| pH  | 4          | 4          | 7.5      |

**PROCESS LIFT STATION (R) (P1)**

Number 1  
Volume 1,500 gallons  
Size 10'-0" x 4'-11" x 5'-7" deep  
Location Buried  
Material Precast Concrete

**Process Lift Station Pump (E)**

Manufacturer Goulds  
Number 2  
Type Submersible  
Capacity 58 gpm @ 42 ft. TDH  
Motor 1 hp

**AERATION POND 1 (R) (P2)**

Volume 372,000 gallons @ 8 feet water depth  
Top Dimensions: 140 feet x 70 feet  
Bottom Dimensions: 100 feet x 25 feet  
Water Depth 8 feet

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION**

**SELF-MONITORING PROGRAM**

**for**

**COSENTINO WINERY, COSENTINO WINERY LLC  
and COSENTINO WINERY  
WASTEWATER TREATMENT SYSTEM,  
7415 ST. HELENA HIGHWAY, NAPA COUNTY .**

**for**

**ORDER NO. R2-2006-0076**

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## **I. PURPOSE**

### **A. GENERAL**

1. This monitoring program is for waste discharge requirements adopted by the California Regional Water Quality Control Board, San Francisco Bay Region (Board).
2. The principal purposes of a monitoring program by a waste discharger, also referred to as a self-monitoring program (SMP), are:
  - a. To document compliance with waste discharge requirements and prohibitions established by the Board; and
  - b. To facilitate self-policing by the waste discharger in the prevention and abatement of pollution or potential threats to water quality arising from waste discharges.
3. Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13268, 13383, and 13387(b) of the California Water Code, and Board Resolution No. 73-16.

## **II. SAMPLING and ANALYTICAL METHODS**

Sample collection, storage, and analyses shall be performed according to Code of Federal Regulations Title 40, Section 136 (40 CFR S136), or other methods approved and specified by the Executive Officer of the Board (Executive Officer).

Water and waste analyses shall be performed by a laboratory approved for these analyses by the State Department of Health Services (DOHS), or by a laboratory waived by the Executive Officer from obtaining a DOHS certification for these analyses, or as otherwise specified in this SMP.

The director of the laboratory whose name appears on the certification, or his/her laboratory supervisor who is directly responsible for the analytical work performed shall supervise all analytical work including appropriate quality assurance/quality control procedures in his/her laboratory and shall sign all reports of such work submitted to the Board.

Measurements by use of portable analytical equipment (field instruments) is acceptable for selected parameters, given the following conditions:

1. The analytical equipment is appropriate for the given analysis and water or waste;
2. The analytical equipment is properly maintained and calibrated;
3. The equipment user is knowledgeable of proper sampling and equipment use practices; and
4. Written notification of the intended use has been provided in advance to the Board, and no the Board has not stated any objections.

All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

### III. DEFINITION of TERMS

The following are definitions and explanations of terms used in this monitoring program.

#### **A. FACILITY AND WASTEWATER SYSTEM.**

NOTE: The following are simplified descriptions, for reference purposes. Additional, more complete, descriptions are given in the findings of this Order.

1. **Facility Site.** The facility site is the land parcel on which the Cosentino Winery facility is located, Napa County Assessors Parcel Number 27-540-013.
2. **Wastewater System.** The wastewater system is all equipment at the facility site used for collection, conveyance, treatment, storage, dispersal and management of wastewater and wastewater solids from the Cosentino Winery facility, and includes both the sanitary wastewater and process wastewater systems.
3. **Sanitary Wastewater Discharge Area.** The sanitary wastewater discharge area is the area on the facility site, at the south side of the winery building, within which treated sanitary wastewater is discharged to land by means of a subsurface drip dispersal system pipe network.
4. **Sanitary Wastewater Discharge System.** The sanitary wastewater discharge system is the portion of the sanitary wastewater system used to convey and discharge treated sanitary wastewater to land.
5. **Process Wastewater Pond.** The winery process wastewater pond is an aerated pond constructed of earth berms extending above native ground level, with an internal baffle wall, and mechanical aerators, located at the south corner of the facility site, used for treatment and storage of winery process wastewater.
6. **Process Wastewater Discharge Area.** The process wastewater discharge area is the area of vineyards on the facility site within which treated winery process wastewater is discharged to land by means of an above-ground drip irrigation system.
7. **Process Wastewater Discharge System.** The process wastewater discharge system is the portion of the process wastewater system used to convey and discharge treated winery process wastewater to land.

#### **B. TYPES OF SAMPLES.**

1. **Flow Measurement.** Flow measurement is the accurate measurement of the flow volume over a given period of time using a properly calibrated and maintained flow measuring device. Flow determination from a properly calibrated and maintained automated pump-use recording device, such as a pump dose event counter, for a properly calibrated and maintained pump, is acceptable.
2. **Grab Sample.** A grab sample is defined as an individual sample collected in a short period of time not exceeding 15 minutes. Grab samples are used primarily in determining compliance with instantaneous maximum or minimum limits, and also for bacteriological limits. Grab samples represent only the condition that exists at the time the sample is collected.
3. **Composite Sample.** A composite sample is defined as a sample composed of individual grab samples. In a flow-weighted composite, the grab samples are mixed in proportions varying not more than plus or minus five percent from the instantaneous rate of waste flow corresponding to each grab sample collected at regular intervals not greater than one hour, or collected by the use of continuous automatic sampling devices capable of attaining the proportional accuracy stipulated above throughout the sampling period. In a time-sequenced composite sample, individual grab samples of specified volume, typically uniform, are obtained at specified time intervals, typically uniform. The sampling period for all composite samples is 24 hours, unless specified otherwise in this SMP or in writing by the Executive Officer.

4. **Groundwater Level.** Groundwater level is the water surface of observed groundwater. For reporting, groundwater level shall be reported as both (a) depth below ground surface - the vertical distance between the groundwater level and the overlying ground surface, and (b) groundwater elevation - the elevation of the groundwater level with respect to a single common reference elevation for which there is an identified fixed stable elevation reference station at the facility site.
5. **Groundwater Sample.** A groundwater sample is a sample of groundwater obtained from a groundwater monitoring well for analytical characterization. Sampling of groundwater shall be conducted in accordance with current accepted standard practices for groundwater sampling.
6. **Pond Water Depth.** Pond water depth is the vertical distance between the free water surface of the water contained in the pond, and the bottom of the water volume contained in the pond.
7. **Pond Freeboard.** Pond freeboard is the vertical distance between the free water surface of the water contained in the pond, and the elevation of the lowest point of the top of the water containment structure (i.e., the elevation at which water would overflow from the pond).
8. **Observations.** Observations are primarily visual observations and inspection of conditions. Observations may include recording measurements from monitoring devices such as freeboard determined from a water level staff gauge, or precipitation determined from a rain gauge.

**C. SAMPLING FREQUENCY.**

- Continuous = Continuous monitoring.  
Daily = One time each calendar day.  
Weekly = One time per calendar week, with sampling interval of at least five days.  
Monthly = One time per calendar month, with sampling intervals of at least three weeks.  
Quarterly = One time per calendar quarter, at intervals of about three months.  
Twice per Month = Two times per calendar month, with sampling intervals of at least ten days.

**D. MONITORING PERIODS.**

For purposes of monitoring, reporting and compliance determinations relevant to requirements specified in this Order and SMP, the following time periods apply:

1. **Daily.** The Daily time period is a 24-hour period associated with a calendar day. The 24-hour period may overlap calendar days (e.g., 8 am of one day to 8 am of the next), but shall be consistent from one sampling event to the next.
2. **Weekly.** The Weekly period is a 7-day calendar week.
3. **Monthly.** The Monthly time period is each respective calendar month.
4. **Annual.** The Annual time period is from April 1 of one calendar year through March 31 of the next following calendar year.
5. **Wine Grape Crush Season.**

For purposes of this monitoring program, the wine grape crush season is defined as follows:

- a. The calendar period of August 1 through December 31, unless acceptable documentation of actual wine grape crushing activity is provided to the Board, as described in b below.
- b. IF documentation of grape crushing activity is provided to the Board, and found to be acceptable to the Executive Officer, THEN the wine grape crush season shall be the period extending from the date of the first delivery of grapes to the Cosentino Winery facility through seven days after the date of completion of all grape crushing activity and associated clean-up, dismantling and storage of all grape crushing equipment. Documentation shall be submitted to the Board annually.

## E. ABBREVIATIONS USED IN TABLE 1, SCHEDULE FOR MONITORING.

### 1. Type of Sample Abbreviations.

- C = Composite Sample
- F = Flow measurement
- G = Grab Sample
- GL= Groundwater level measurement.
- O = Observation.

### 2. Parameter Abbreviations.

- BOD<sub>5</sub> 20°C = Biochemical Oxygen Demand, 5-day, at 20 °C
- TSS = Total Suspended Solids

### 3. Unit Abbreviations.

- F or C = Fahrenheit or Celsius
- mg/L = milligrams per liter
- MPN/100 ml = Most Probable Number, per 100 milliliters
- N = Nitrogen

### 4. Sampling Frequency Abbreviations.

- D = Daily
  - W = Weekly
  - M = Monthly
  - Q = Quarterly
  - Cont. = Continuous
  - D&M = Daily and Monthly
  - Event = Each service or discharge event
  - 2/M = Twice per Month
- Cont: D&M = Continuous monitoring; Record and Report Daily & Monthly values

### 5. Other Abbreviations.

- PW = Process Wastewater (winery process wastewater)
- SW = Sanitary Wastewater
- RTF = Sanitary Wastewater System Recirculating Textile Filter Treatment System
- Crush = Wine Grape Crush Season
- Noncrush = All time other than Wine Grape Crush Season

## F. STANDARD OBSERVATIONS.

### 1. Process Wastewater Pond.

- (a) Measure and record pond water depth and pond freeboard, in feet and inches.
- (b) Determine and record wind velocity and direction.
- (c) Observe and record water color.
- (d) Check (smell) for nuisance odors. If detected, record description and apparent source & cause.
- (e) Check all aerators for operational status. Note whether operating or not. Record and report each and every time (calendar date and time of day) when any aerator is turned on or off.
- (f) Check entire pond perimeter, both internal and external sides of berms, for structural and hydraulic integrity, including evidence of any seepage, leaks, or other improper condition of the pond structure and other equipment associated with pond water containment (pipes, valves, depth staff gauge).
- (g) Check perimeter fence for integrity and proper closure of all gates.
- (h) Check that warning signs are properly posted to inform public that pond water is wastewater which is not safe for drinking or contact.

**2. Process Wastewater Discharge Area.**

- (a) Check (smell) area for odors.
- (b) Check area for evidence of any standing surface water (ponded water).
- (c) Check for evidence of mosquitoes breeding within the area due to standing water.
- (d) Check all visible distribution system components for proper condition and hydraulic integrity.
- (e) Check discharge area runoff containment systems (berms and/or subsurface drains) for proper condition and integrity. Note and record any evidence of any wastewater escaping the discharge area.
- (f) Check perimeter for integrity and proper condition of all discharge control and monitoring systems.
- (g) Check that warning signs are properly posted to inform public that discharge area water is wastewater which is not safe for drinking.

**3. Sanitary Wastewater Discharge Area.**

- (a) Check (smell) area for odors.
- (b) Check area for evidence of any standing water or surfacing wastewater.
- (c) Check area perimeter for proper hydraulic containment of wastewater. During dry season, note any seepage. During wet season, note any concentrated runoff flows.
- (d) Check all visible distribution system components for proper condition and hydraulic integrity.
- (e) Check grass for proper maintenance (mowing). Record approximate height of grass.
- (f) Check perimeter for integrity and proper condition of all discharge control and monitoring systems.
- (g) Check that warning signs are properly posted to inform public that discharge area water is wastewater which is not safe for drinking or contact.

**IV. DESCRIPTION of MONITORING STATIONS**

**A. GENERAL.**

1. **Monitoring Station Definitions.** Stations to be used for sampling and observations in this SMP are described in Section IV, below. Each station is identified by a station code, and station description. The Station Code is a reference code for station identification in this SMP, and in recording and reporting of monitoring data. The Station Description is a description of the water, wastewater, point of the wastewater system, or land area where specified monitoring is to be conducted.
2. **Monitoring Station Changes.** Changes to the monitoring stations defined in this SMP may be authorized by the Executive Officer, in order to accommodate changes in the wastewater system or wastewater system operations or to provide improved monitoring. Requests for changes to the monitoring stations must be submitted to the Board in writing, with a detailed explanation of the purpose of the proposed station changes. Proposed changes to monitoring stations must be approved in writing from the Executive Officer, prior to implementation.
3. **Site Plan Showing All Monitoring Stations.** The Discharger shall develop a scaled and legible plan view drawing of the facility site which clearly shows the locations of all major components of the wastewater system, all monitoring stations identified in this SMP, and relevant land use features such as buildings, access roads, property boundaries and surface water drainage systems. A copy of this drawing shall be included with all reports submitted in response to this SMP.

## **B. SANITARY WASTEWATER.**

### **1. Cosentino Winery Sanitary Wastewater.**

- a. Station Code: A-1
- b. Station Description: Wastewater at a point in the sanitary wastewater system where all sanitary wastewater from the Cosentino Winery tributary to the sanitary wastewater system is present.
- c. Purpose. The purpose of this station is for measuring the total flow of sanitary wastewater from the Cosentino Winery facility, and for determination of compliance with Discharge Specification B.2.a. of this Order.

### **2. Recirculating Textile Filter Unit Influent.**

- a. Station Code: A-2
- b. Station Description: Wastewater at a point in the sanitary wastewater system prior to the recirculating textile filter (RTF) unit where all wastewater influent to the RTF unit is present.
- c. Purpose. The purpose of this station is for sampling and analytical characterization, and flow measurement as necessary, of the RTF Unit influent, to monitor and evaluate RTF performance.

### **3. Recirculating Textile Filter Unit Recirculation Flow.**

- a. Station Code: A-3
- b. Station Description: Wastewater at a point in the sanitary wastewater system prior to the recirculating textile filter (RTF) unit where all wastewater effluent from the RTF unit that is recirculated back to the RTF unit influent is present, suitable for characterizing the flow rate of recirculated water.
- c. Purpose. The primary purpose of this station is for characterization of recirculation flows, to monitor and evaluate RTF performance.

### **4. Discharges to the Sanitary Wastewater Discharge Area (Final Treated Sanitary Wastewater).**

- a. Station Code: E-1
- b. Station Description: Wastewater at a point in the sanitary wastewater system after, downstream of, all treatment processes, where all treated sanitary wastewater to be discharged to the sanitary wastewater discharge area is present.
- c. Purpose. The purpose of this station is for measurement of all flows discharged to the sanitary wastewater discharge area, and for sampling and analytical characterization of the quality of the final treated sanitary wastewater to be discharged to land.

## **C. PROCESS WASTEWATER.**

### **1. Process Wastewater - Inside Winery Building.**

- a. Station Code: B-1
- b. Station Description: Wastewater at a point in the process wastewater system where all wastewater tributary to the process wastewater system that is collected from inside the winery building is present.
- c. Purpose. The purpose of this station is for measurement of the total flow of process wastewater collected from inside the winery building.

### **2. Process Wastewater - Outside Winery Building.**

- a. Station Code: B-2
- b. Station Description: Wastewater at a point in the process wastewater system where all wastewater tributary to the process wastewater system that is collected from the paved area outside of the winery building's main work entrance way on the northwest side of the winery building is present.
- c. Purpose. The purpose of this station is for measurement of the total flow of all process wastewater (including contaminated storm water) collected from the paved area outside of the winery building.

**3. Process Wastewater Pond Influent.**

- a. Station Code: B-3
- b. Station Description: Wastewater at a point in the process wastewater system where all wastewater tributary to, to be discharged into, the process wastewater pond is present.
- c. Purpose. The purpose of this station is for measurement of the total flow of wastewater into the process wastewater pond, and for analytical characterization of this water.

**4. Discharges to the Process Wastewater Discharge Area (Final Treated Process Wastewater).**

- a. Station Code: E-2
- b. Station Description: Wastewater at a point in the process wastewater system after, downstream of, all treatment processes, where all treated process wastewater to be discharged to the process wastewater discharge area is present.
- c. Purpose. The purpose of this station is for measurement of all flows discharged to the process wastewater discharge area, and for sampling and analytical characterization of the quality of the final treated process wastewater to be discharged to land.

**D. PROCESS WASTEWATER POND.**

**1. Pond Water in Pond Zone 1.**

- a. Station Code: P-1
- b. Station Description: Water in the winery process wastewater pond in the first zone of the pond (i.e., between the influent point and the baffle wall), about two feet from the water's edge and 6 inches below the water surface.
- c. Purpose. The purpose of this station is for monitoring pond water quality in this zone of the pond.

**2. Pond Water in Pond Zone 2.**

- a. Station Code: P-2
- b. Station Description: Water in the winery process wastewater pond in the second zone of the pond, (i.e., between the baffle wall and the effluent point), about two feet from the water's edge and 6 inches below the water surface.
- c. Purpose. The purpose of this station is for monitoring pond water quality in this zone of the pond.

**3. Pond Area Observations.**

- a. Station Code: PA-n
- b. Station Description: At points on and around the pond perimeter berm suitable for making standard observations of the pond and pond berm conditions. At least one point shall be a point suitable for measuring the pond water level and depth.
- c. Purpose. The purpose of these stations is for making standard observations, including pond water level and depth.

**E. TREATMENT TANKS (Septic Tanks, Pump Tanks).**

**1. Sanitary Wastewater Recirculating Textile Filter System Processing Tank.**

- a. Station Code: SW2
- b. Station Description: Tank that is part of the RTF System, which receives sanitary wastewater from the Cosentino Winery facility.

**2. Sanitary Wastewater Recirculating Textile Filter System Filter Pod Tanks.**

- a. Station Code: SW3a, SW3b, SW3c, and SW3d (one code for each of four tanks, respectively)
- b. Station Description: Tanks that are part of the RTF System, which contain the RTF filter media.

**3. Sanitary Wastewater Effluent Holding Tank.**

- a. Station Code: SW4
- b. Station Description: Tank that receives wastewater from the tablet chlorinator disinfection unit, used for disinfectant contact time and for pumping to the sanitary wastewater discharge area.

**4. Process Wastewater Collection System Catch Basin.**

- a. Station Code: PW2
- b. Station Description: Tank in the collection system at the north edge of the paved area on the north side of the winery building, used for collection and pumping of process wastewater from the paved area to the Process Waste Vault.

**5. Process Wastewater Lift Station.**

- a. Station Code: PW3
- b. Station Description: Pump station tank that receives process wastewater from the Cosentino Winery facility, and from which process wastewater is pumped to the process wastewater pond.

**6. Purpose.**

The primary purpose of these stations is for monitoring and reporting service events, and total volume of material removed from the respective tanks, for haul-away and disposal to an off-site location.

**F. OTHER TREATMENT UNITS.**

**1. Tablet Chlorinator Disinfection Unit.**

- a. Station Code: O-1
- b. Station Description: Device used in disinfection of the sanitary wastewater by introduction of chlorine to the wastewater stream by water contact with solid disinfectant tablets.

**2. Sanitary Wastewater Scale Inhibitor Feed System.**

- a. Station Code: O-2
- b. Station Description: Device (s) used to discharge scale inhibitor chemicals into the sanitary wastewater system, and/or location in the system where these discharges occur.

**3. Sanitary Wastewater Microstrainer.**

- a. Station Code: O-3
- b. Station Description: Microstrainer filtration device in the sanitary wastewater system prior to the sanitary wastewater discharge system subsurface drip dispersal pipe network.

**4. Process Wastewater Hypochlorite Feed System.**

- a. Station Code: O-4
- b. Station Description: Device(s) used to discharge hypochlorite chemicals into the process wastewater system, and/or location in the system where these discharges occur.

**5. Process Wastewater Scale Inhibitor Feed System.**

- a. Station Code: O-5
- b. Station Description: Device(s) used to discharge scale inhibitor chemicals into the process wastewater system, and/or location in the system where these discharges occur.

**6. Process Wastewater Microstrainer.**

- a. Station Code: O-6
- b. Station Description: Microstrainer filtration device in the process wastewater system, prior to the process wastewater discharge system drip irrigation pipe network.

**7. Process Wastewater Discharge Pump.**

- a. Station Code: O-7
- b. Station Description: Pump system used to pump treated process wastewater to the process wastewater discharge area.

**8. Purpose.** The purpose of these stations is for monitoring and reporting of all activities at the stations, including addition of chemicals to the wastewater streams, or removal of filtered materials from the wastewater streams, and for reporting unit service events.

**G. DISCHARGE AREA OBSERVATION STATIONS.**

**1. Sanitary Wastewater Discharge Area.**

- a. Station Code: SD - n
- b. Station Description: Points within and around the perimeter of the sanitary wastewater discharge area suitable for observation of discharge area conditions.
- c. Purpose. The purpose of these stations is for standard observations of the subject discharge area.

**2. Process Wastewater Discharge Area.**

- a. Station Code: PD - n
- b. Station Description: Points within and around the perimeter of the process wastewater discharge area suitable for observation of discharge area conditions.
- c. Purpose. The purpose of these stations is for standard observations of the subject discharge area.

**H. GROUNDWATER.**

**1. Up-gradient Well.**

- a. Station Code: GW-1
- b. Station Description: Groundwater at a monitoring well located up-gradient from the discharge areas, and representative of background groundwater conditions.

**2. Down-gradient Wells.**

- a. Station Code: GW-2, GW-3 and GW-4
- b. Station Description: Groundwater at each of three monitoring wells located down-gradient from the discharge areas, and representative of groundwater conditions down-gradient of those areas.

**3. Purpose.** The purpose of these stations is for observation and measurement of groundwater levels and for obtaining samples of groundwater for analytical characterization of the groundwater.

**4. Locations.** The locations of these wells will be determined in accordance with the Groundwater Monitoring Program technical report required by this Order.

**V. MONITORING SCHEDULE and MONITORING SPECIFICATIONS**

**A. MONITORING SCHEDULE.**

1. **Table 1.** The Discharger is required to perform sampling, analyses and observations according to the schedule tabulated in **Table 1 - Schedule for Monitoring**, given at the last page of this SMP, and the associated Monitoring Specifications given in Section V.B. below.
2. **Table 1 Notes.** Table 1 includes references labeled "Notes", given as parenthesized numbers, e.g., [1], [2], for particular monitoring parameters and/or monitoring stations. These references correspond to further monitoring specifications given below in Section V.B., Monitoring Specifications.

## B. MONITORING SPECIFICATIONS.

### 1. Flow Monitoring and Reporting.

- a. For stations A-1, A-2, B-1, B-2, B-3, E-1 and E-2, flows shall be monitored continuously and reported as Daily Flow, in gallons, for each day when flow at these stations occurs, and Monthly Total, in gallons.
- b. For a station where flows are directly related to flows at another station, flows derived from one station may be used as representative flows for purposes of reporting flows at another station, provided that the Discharger has submitted technical report documentation acceptable to the Executive Officer that such representative flow monitoring will provide adequate and reliable recording and reporting of the identified wastewater system flows.

### 2. Sampling.

- a. Sampling for monitoring analyses is required only when the identified part(s) or component(s) of the wastewater system associated with a given monitoring station is (are) in use.
- b. For stations A-2, B-3, and E-1, sampling for the following parameters shall be conducted by means of 24-hour flow-weighted or time-sequenced composite samples: BOD, TSS, and Nitrogens.

### 3. Pond Water BOD Monitoring.

Pond water monitoring shall include sampling and analysis of the water at station P-2 for BOD:

- a. Monthly during Start-Up Monitoring (see also Specification B.11 below); and
- b. Anytime when the Dissolved Oxygen level of water at station P2 is found to be less than 1.0 mg/L.

### 4. Nitrogens.

- a. The parameter 'Nitrogens' in this SMP means all of the following parameters:
  - (1) Ammonia Nitrogen,
  - (2) Nitrate Nitrogen, and
  - (3) Total Kjeldahl Nitrogen (TKN).
- b. Analytical results for the above nitrogen parameters shall be reported as: mg/L as nitrogen.
- c. Determination of compliance with the limit specified in this Order for Total Nitrogen shall be made against the sum of the analytical results for Nitrate Nitrogen, and Total Kjeldahl Nitrogen (TKN).

### 5. Groundwater Level.

For all groundwater monitoring wells, stations GW-n, groundwater levels shall be measured, recorded and reported for each station, twice per month, in feet and inches.

### 6. Precipitation.

Precipitation (rainfall) monitoring shall be continuous, and recorded and reported, as total rainfall for each calendar day and as the total for each calendar month. Precipitation monitoring shall be representative of precipitation falling on the pond and discharge areas.

### 7. Chemical Dose Data.

For all events involving discharge of supplemental materials into the wastewater system, such as addition of disinfectant, hypochlorite or scale inhibitor chemicals, the following shall be reported for each respective station:

- a. Calendar date of the event;
- b. Times of day when event started and stopped;
- c. Component serviced (Monitoring Station, or narrative description);
- d. Material added;
- e. Reason material was added; and
- f. Volume in gallons; and Concentration in mg/L, of the material added.

**8. Service Event Data.**

- a. Haul-Away.** For all service events involving removal of wastewater and/or solids (sludge) from the wastewater system for haul-away and off-site disposal, the following shall be reported:
- (1) Calendar date of the service event;
  - (2) Times of day when service started and stopped;
  - (3) Component serviced (Monitoring Station, or narrative description);
  - (4) Total volume of material removed;
  - (5) Service Provider; and
  - (6) Final destination point of disposal (e.g., specific municipal wastewater treatment plant).
- b. Process Wastewater Catch Basin Diverter Valve.** For station PW2, any time the diverter valve is changed, the following shall be reported:
- (1) Calendar Date and Time when changed;
  - (2) Person that made the change; and
  - (3) End-result status (e.g., destination of flow out of the catch basin).

**9. Standard Observations.** Standard Observations are defined in SMP Section III.

**10. Pond Depth & Freeboard.** Record and report pond water depth, and pond freeboard, in feet and inches.

**11. Start-Up Monitoring.** Monitoring frequencies shown in Table 1 as underlined frequency codes (e.g., M) indicate monitoring frequency applicable during system "Start-Up" periods. "Start-Up" periods are hereby defined as: (a) at least the six months of operation after system completion and start-up, or continuing until stable operations are achieved, if longer than six months; and (b) at any time when the treatment process experiences upset, shut-down, or any other unstable operations, and continuing for at least 30 calendar days following the start of such event, or continuing until stable operations are achieved, if longer than 30 days.

**C. INCREASED MONITORING FREQUENCY.**

If any monitoring indicates a violation of waste discharge requirements or unstable wastewater system operation or performance, OR, if any specified samplings or analyses are not completed as required, then the monitoring for the parameter(s) and monitoring station(s) in concern shall immediately and henceforth be conducted at twice the frequency identified in Table 1 of this SMP. This increased monitoring frequency shall be maintained for at least two sampling events, and until such time as the results of monitoring indicate violations are no longer occurring or the problem has been corrected and the wastewater system has returned to stable operation and performance.

**D. MONITORING BY USE OF AUTOMATED INSTRUMENTS.**

Selected parameters may be monitored by the use of automated analytical instruments, provided such instruments are properly maintained and periodically calibrated to ensure accurate measurements, and that these instruments and their use is documented in the Operation and Maintenance Program Manual, and written approval by the Executive Officer has been provided.

**E. GROUNDWATER MONITORING PROGRAM.**

The Discharger is required to implement a program of groundwater monitoring in the vicinity of the wastewater discharge areas, in accordance with Provision 7 of this Order. This SMP includes monitoring and reporting requirements for that program, with the exception of the specific monitoring stations, groundwater monitoring wells. Specifications and locations of these monitoring stations are to be addressed in the Groundwater Monitoring Program technical report required by Provision 7 of this Order.

Groundwater monitoring shall be implemented in accordance with the requirements of Provision 7. If any revisions to the groundwater monitoring and reporting requirements specified in this SMP are necessary, such as in response to the technical report required by Provision 7 or other new information about groundwater or groundwater monitoring related to the discharges, such revisions shall be specified, in writing, by the Executive Officer.

**F. MODIFICATION OF MONITORING PRACTICES.**

Modifications of the monitoring practices specified in this SMP may be authorized by the Executive Officer, in consideration of acceptable accumulated data and acceptable alternate means of monitoring. Factors to be considered include: data quality, adequate characterization of the identified water or wastewater system process, consistency of system performance, compliance with waste discharge requirements, and acceptable means for providing equivalent and adequate monitoring of the identified water or wastewater system process. Requests for modification of monitoring practices must be submitted to the Board in writing, with a technical report which includes evaluation of accumulated data, and a complete description of proposed alternate means of monitoring. Proposed modifications of monitoring practices must be approved in writing from the Executive Officer, prior to implementation.

**VI. REPORTS to be SUBMITTED to the BOARD**

**A. MONITORING REPORTS.**

The Discharger shall submit to the Board monitoring reports documenting the wastewater system operation and performance, and compliance with waste discharge requirements, in accordance with the following:

**1. Report Schedule.**

- a. Monthly Reports.** Written reports shall be prepared for each calendar month and shall be submitted to the Board by the last day of the month following the monitoring period.
- b. Annual Reports.** Written reports shall be prepared for each annual monitoring period (April 1 through March 31) and shall be submitted to the Board by May 15th following the monitoring period.

**2. Transmittal Letter.**

A letter of transmittal shall accompany each monitoring report submitted to the Board. The transmittal letter shall include the following:

- a. Identification.** Identification of the following:
  - (1) The discharge facility by name and address;
  - (2) The monitoring period being reported;
  - (3) The name and telephone number of a person familiar with the report and the current status of the wastewater system, for follow-up discussions as may be needed; and
  - (4) The name of the Board staff case handler.
- b. Operation and Maintenance Activities.** Discussion of all significant wastewater system operation and maintenance activities that occurred during the reporting period (e.g., pumping of septic tanks; repair or replacement of system equipment), including dates and reasons for such activities.
- c. Violations or Problems.** Discussion of any violations of waste discharge requirements, and any problems or unusual conditions, that occurred during the reporting period. This shall include reporting of the following information:
  - (1) Date and time of occurrence;
  - (2) Location of occurrence, shown on a scaled plan drawing of the facility site;
  - (3) Description of the violation, problem or unusual condition;
  - (4) Corrective actions taken or planned to correct the violation, problem, or unusual condition and a time schedule for implementation of these actions. Actions may include increased monitoring and any changes to wastewater system equipment or operations.

If a report describing corrective actions and/or a time schedule for implementation of those actions was previously submitted to the Board, then reference to that report is satisfactory. References to other reports shall include the Date, Title or subject, and Author of the referenced report.

- d. **Transmittal Letter Signature(s).** The transmittal letter shall be signed by: (1) the Discharger's principal executive officer, ranking elected official or duly authorized representative, and (2) the wastewater system chief plant operator, with the following certification statement:

"I certify under penalty of law that this document and all attachments have been prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. 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."

3. **Results of Analyses and Observations.**

Each report shall include results of analyses and observations in accordance with the following:

- a. **Monitoring Results.** Each monitoring report shall include tabulations of results from all required analyses, measurements and observations specified in this SMP for the reporting period, including:
- (1) Date of sampling or observation;
  - (2) Location of sampling or observation (sample station);
  - (3) Parameter of analysis (e.g., pH, Dissolved Oxygen, etc.); and
  - (4) The result of the analysis, measurement or observation.
- b. **Data Presentation.** In reporting monitoring data, the data shall be arranged in tabular form so that the data are clearly discernible. The data shall be summarized in a manner to illustrate clearly whether the discharge is in compliance with waste discharge requirements and this SMP. Reporting shall include maximum, minimum and monthly average values for each parameter for which more than one sample result is obtained during the monitoring period.
- c. **Sample Analysis Data.** For all sample analyses, include the following:
- (1) Date of analysis;
  - (2) Individual or contract laboratory conducting the analysis;
  - (3) Analytical procedure or method used, and test method detection level; and
  - (4) Copies of laboratory analysis result reports for all analyses conducted by a contract laboratory.
- d. **Reporting Results Below Detection Limits.** For all analytical characterizations (laboratory tests) for which results are identified as below limits of detection of the test procedure, data reporting shall include the limit of detection. In other words, reporting a sample test result as only "ND", or "not detected" or similar, is not acceptable; the actual numeric value of the detection limit must also be reported. It is acceptable to use notations of non-detection - "ND" or similar - in data tables, provided that the corresponding limit of detection is clearly identified elsewhere in the table, or as a footnote of the table.
- e. **Additional Monitoring Results.** If any parameter is monitored more frequently than is required by this SMP, then the results of such monitoring shall be included in the monitoring reports, and in any calculations of statistical values.

4. **Identification of Monitoring Stations.**

Each report shall include a scaled and legible plan view drawing of the facility site which shows the locations of all monitoring stations at which monitoring is required by this SMP.

5. **Monitoring During Wastewater System Modifications.**

Whenever any modifications to the wastewater system occur, the monitoring report shall include a description of work that has occurred during the monitoring period, any impacts to the wastewater system operations and, if work is incomplete, anticipated completion schedule.

**6. Annual Monitoring Reports.**

The annual monitoring report shall include the following:

- a. Tabular and graphical summaries of the monitoring data obtained during the period being reported.
- b. A discussion of wastewater system performance and record of compliance with the requirements specified by this Order, including monitoring and reporting requirements.
- c. A complete discussion of groundwater monitoring results, including evaluation of groundwater movement, changes in groundwater levels and quality, and evaluation of any observed changes with respect to the wastewater discharges.
- d. For any event of non-compliance with requirements specified by this Order, including monitoring and reporting requirements, the report shall include description of corrective actions taken or planned to achieve full compliance, and a time schedule of when those actions were or will be taken.

**B. REPORTS OF VIOLATIONS.**

If the Discharger violates or threatens to violate waste discharge requirements or this SMP due to:

- a. Maintenance work, power failure, or breakdown of wastewater system equipment;
- b. Accidents caused by human error or negligence; or
- c. Other causes such as acts of nature, then:

the Discharger or Discharger's agent(s) shall notify the Board office by telephone as soon as the Discharger or Discharger's agent(s) have knowledge of the incident. Written notification shall be submitted within two weeks of the date of the incident, unless directed otherwise by Board staff. The written notification shall include pertinent information explaining reasons for the non-compliance and what steps were taken to correct the problem and the dates thereof, and what steps are being taken to prevent the problem from recurring.

**C. BOARD ADDRESS and PHONE NUMBER.**

This Board's current office mailing address and phone number is given below. This is the address to be used for submittal of reports and correspondence to the Board.

1. **Address:** California Regional Water Quality Control Board, San Francisco Bay Region  
1515 Clay Street, Suite 1400, Oakland, CA 94612
2. **Phone number:** (510) 622 - 2300; Fax: (510) 622 - 2460.

**VII. REPORTS to be SUBMITTED to OTHER ENTITIES**

**A. MONITORING REPORTS.**

For each monitoring report required to be submitted to the Board, a complete copy of the report shall be submitted, at the same time that the report is submitted to the Board, to the Napa County Environmental Management Department, at their current address. As of Order adoption, their current mailing address is:

Napa County Environmental Management Department  
1195 Third Street, Room 101, Napa, CA 94559

**B. REPORTS OF VIOLATIONS.**

For any violation of waste discharge requirements that involves potential immediate threat to public health or impacts to adjacent properties, including discharges of inadequately treated wastewater, or overflows or spills from the wastewater system, the Discharger shall notify the property owners of the adjacent residential properties by telephone as soon as the Discharger or Dischargers agent have knowledge of the incident.

**VIII. MONITORING PROGRAM CERTIFICATION**

I, Bruce H. Wolfe, Executive Officer, hereby certify that this Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in the Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements for the subject wastewater systems.
2. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the Discharger, and revisions will be ordered by the Executive Officer.
3. Is effective on the following date: November 13, 2006.

  
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BRUCE H. WOLFE  
Executive Officer

[File No. 2139.3135]  
[WDID No. 2 283135001]  
[Prepared by BDA]  
[Reviewed by WBH, WKB]

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**TABLE 1 - SCHEDULE for MONITORING**

| Monitoring Station:                    | A-1                       | A-2                            | E-1   | E-1                             | E-1                      | B-1 & B-2                              | B-3                                    | B-3                          | E-2                    | P-1                    | P-2                    | PA-n            | SD-n & PD-n                  | O-1, -2, -4, & -5                    | SWn & PWn            | All GW                      |
|--|---------------------------|--------------------------------|---|---------------------------------|--------------------------|--|--|------------------------------|------------------------|------------------------|------------------------|-----------------|------------------------------|--------------------------------------|----------------------|-----------------------------|
|  | Sanitary Waste water<br>F | RTF Influent<br>F, G, C<br>[2] | SW Discharges: "Startup"<br>F, G, C<br>[2],[11] | SW Discharges<br>F, G, C<br>[2] | Process Waste water<br>F | Pond Influent: Noncrush<br>F, C<br>[2] | Pond Influent: Crush<br>F, G, C<br>[2] | PW Discharges<br>F, G<br>[2] | Pond Water<br>G<br>[3] | Pond Water<br>G<br>[3] | Pond Water<br>G<br>[3] | Pond Area<br>O  | SW & PW Discharge Areas<br>O | Chemical Feed Devices<br>F, G<br>[7] | Treatment Tanks<br>F | Ground water Wells<br>G, GL |
| Type of Sample:                        | Cont.: D&M                | Cont.: D&M<br>2/M; M           | Cont.: D&M<br>2/M                               | Cont.: D&M<br>2/M               | Cont.: D&M<br>2/M        | Cont.: D&M<br>M; Q                     | Cont.: D&M<br>2/M                      | Cont.: D&M<br>2/M            | Cont.: D&M<br>W        | Cont.: D&M<br>W        | Cont.: D&M<br>W        | Cont.: D&M<br>W | Cont.: D&M<br>W              | Cont.: D&M<br>W                      | Cont.: D&M<br>W      | Cont.: D&M<br>W             |
| Parameter                              | (units)                   | [Notes]                        |   |                                 |                          |  |  |                              |                        |                        |                        |                 |                              |                                      |                      |                             |
| Flow Volume                            | (gallons)                 | [1]                            |   |                                 |                          |  |  |                              |                        |                        |                        |                 |                              |                                      |                      |                             |
| BOD <sub>5</sub> 20°C                  | (mg/L)                    | [2][3]                         |   |                                 |                          |  |  |                              |                        |                        |                        |                 |                              |                                      |                      |                             |
| TSS                                    | (mg/L)                    | [2]                            |   |                                 |                          |  |  |                              |                        |                        |                        |                 |                              |                                      |                      |                             |
| Temperature                            | (degrees F or C)          |                                |   |                                 |                          |  |  |                              |                        |                        |                        |                 |                              |                                      |                      |                             |
| pH                                     | (pH units)                |                                |   |                                 |                          |  |  |                              |                        |                        |                        |                 |                              |                                      |                      |                             |
| Dissolved Oxygen                       | (mg/L)                    |                                |   |                                 |                          |  |  |                              |                        |                        |                        |                 |                              |                                      |                      |                             |
| Fecal Coliform                         | (MPN/100 ml)              |                                |   |                                 |                          |  |  |                              |                        |                        |                        |                 |                              |                                      |                      |                             |
| Chlorine Residual                      | (mg/L)                    |                                |   |                                 |                          |  |  |                              |                        |                        |                        |                 |                              |                                      |                      |                             |
| Phosphate                              | (mg/L as Phosphate)       |                                |   |                                 |                          |  |  |                              |                        |                        |                        |                 |                              |                                      |                      |                             |
| Nitrogens                              | (mg/L as N)               | [2][4]                         |   |                                 |                          |  |  |                              |                        |                        |                        |                 |                              |                                      |                      |                             |
| Total Dissolved Solids                 | (mg/L)                    |                                |   |                                 |                          |  |  |                              |                        |                        |                        |                 |                              |                                      |                      |                             |
| Conductivity                           | (micromhos/cm)            |                                |   |                                 |                          |  |  |                              |                        |                        |                        |                 |                              |                                      |                      |                             |
| Groundwater Level                      | (feet & inches)           | [5]                            |   |                                 |                          |  |  |                              |                        |                        |                        |                 |                              |                                      |                      |                             |
| Precipitation                          | (inches)                  | [6]                            |   |                                 |                          |  |  |                              |                        |                        |                        |                 |                              |                                      |                      |                             |
| Chemical Dose Data (Date, Time, etc.)  |                           | [7]                            |   |                                 |                          |  |  |                              |                        |                        |                        |                 |                              |                                      |                      |                             |
| Service Event Data (Date, Time, etc.)  |                           | [8]                            |   |                                 |                          |  |  |                              |                        |                        |                        |                 |                              |                                      |                      |                             |
| Standard Observations                  |                           | [9]                            |   |                                 |                          |  |  |                              |                        |                        |                        |                 |                              |                                      |                      |                             |
| Pond Depth & Freeboard (feet & inches) |                           | [10]                           |   |                                 |                          |  |  |                              |                        |                        |                        |                 |                              |                                      |                      |                             |