CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2012-0108

WASTE DISCHARGE REQUIREMENTS
FOR
QUADY WINERY, INC.
MADERA COUNTY

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

1. Quady Winery, Inc. (Winery), a California corporation, has owned and operated the Quady Winery in Madera County near the City of Madera since 1977. The Winery property is at the northwest corner of Road 24 and Avenue 13, as shown on Attachment A, which is attached hereto and made part of this Order. The Winery property comprises about 16 acres and is in the southwest quarter of Section 27, T11S, R17E. The Assessor Parcel Numbers of the two parcels that comprise the Winery property are 045-152-039 and 045-152-046.

2. The Winery has been regulated by waivers of waste discharge requirements for small food processors since 1997, but the Winery submitted a Report of Waste Discharge for increasing its wastewater discharge in 2008. The higher discharge flows require individual waste discharge requirements (WDRs).

3. The Winery operates year round, but from a wastewater standpoint, the primary period of operations is the harvest or crush period that typically extends from mid- August through October. During this period, the Winery operates about 12 hours a day about six days per week. The remainder of the year, the Winery operates five days per week and eight hours a day except for a two week period in January were the Winery operates 24 hours per day.

Existing Discharge

4. The winery crushes from about 600 to 825 tons of grapes during the crush. In 2011, the Winery produced about 342,000 gallons of wastewater for an average of about 950 gallons per day.

5. The wastewater is primarily wash water generated from the washing of various tanks, barrels, pumps, hoses, and filters, and the surface areas around various wine making areas. There is no distillation at the winery.

6. Tanks are washed with a high pressure water jet. Citric acid and soda ash are applied alternately to remove wine residuals. Quady also uses various commercial cleaning products to clean the wine making equipment. Tri sodium phosphate is used to remove wine residuals that could not be removed by the citric acid soda ash cleansers. A

cleanser called Proxy Clean, a product that releases hydrogen peroxide, is used to sanitize the winemaking equipment. Another commercial cleanser, Draw 476, an iodine based sanitizer, is used to sanitize the floor within the wine making areas.

7. Beginning typically in November, the emphasis switches from wine making to filtration of the new wines using various filters including diatomaceous earth. The filters are cleaned about every five hours and the floors are sanitized after each filter cleaning.

8. From November through July, wines are transferred from tank to barrel and back again for bottling. Beginning in January and continuing through July the wines are bottled. Each bottle is rinsed prior to filling, and after each bottling the floors are sanitized. Bottling rinsing activities produce about 11,000 gallons of wastewater annually.

9. Wastewater generated at the Winery is filtered, routed to a sump, and then used to irrigate an adjacent vineyard. The sump is a polyethylene tank enclosed in a concrete secondary containment structure and has a capacity of about 1,100 gallons. A pump turns on automatically when about half full and pumps the wastewater to the vineyard.

10. The ground surfaces around the wine making areas are washed and sanitized between the equipment cleaning events. Several of these areas are outside and the resulting runoff and/or wastewater is routed to area drains and discharged into the sump. In addition, storm water from these surfaces is directed to drains that discharge to the sump. During the wet season, the Winery estimates that an average of 50,000 gallons per year of storm runoff from paved surfaces used for wine processing enters the wastewater sump. The 50,000 gallons of rainwater produced annually is included in the total volume of wastewater generated per year.

11. Solids greater than 1/8 inch in diameter are screened out of the wastewater prior to the discharge. The screenings consists of approximately 100 tons of grape pomace plus diatomaceous earth mixed with grape solids from wine product filtration. This material is composted onsite along with approximately 100 tons of purchased manure and used as a soil amendment in the vineyard. The estimated volume of compost produced annually ranges from 250 to 400 cubic yards, and as such is exempt from permitting per the requirements of Title 14 of the California Code of Regulations (CCR), Section 17855 (a) (4).

Wastewater Reuse

12. As discussed above, wastewater is used to flood irrigate an adjacent 10-acre vineyard (Land Application Area), but the Winery reports it only uses about two of the available 10 acres, as the wastewater infiltrates into the subsurface prior to it spreading out over the entire 10 acres due to the small volume and the high permeability of the underlying soils. Additionally, the southern 6.5 acres of the vineyard contain soils that drain well, while the northern 3.5 acres contain soils that cause water to pond. Provision F. 10 of

this Order requires the Discharger to submit a Wastewater Irrigation Management Plan that will detail its proposed methods to evenly apply its wastewater to the southern 6.5 acre Land Application Area. The Winery and the Land Application Area are shown in Attachment B, which is attached hereto and made part of this Order.

13. To ensure the wastewater is spread evenly over the entire 6.5 acres, this Order contains Provision F. 10, which requires Quady to submit a Wastewater Irrigation Management Plan that describes wastewater application practices and ensures the wastewater is spread evenly over the Land Application Area.

Loading Estimates

14. As the Winery was regulated by waivers of waste discharge requirements for small food processors since 1997, there are no analytical results to estimate the potential loading of the discharge. Central Valley Water Board staff used standard winery wastewater values (listed in R5-2009-0097, *Conditional Waiver of Waste Discharge Requirements for Small Food Processors and Small Wineries*) to analyze the discharge as shown below.

    Biochemical Oxygen Demand (BOD) = 300 – 12,000 milligrams per liter (mg/L);

    Total dissolved solids (TDS) = 80 - 6,000 mg/L; and

    Total Nitrogen = 1 to 50 mg/L.

15. In 2011, the Winery produced about 342,000 gallons of wastewater. The flows varied depending upon the time of the year. Specifically, prior to the crush from 7 January until the beginning of the 2011 crush on 24 August 2011(229 days), the Winery produced a total of 123,630 gallons of wastewater for an average discharge of 540 gallons per day (gpd). During the 2011 crush period (24 August through 31 October, 68 days), the winery produced a total of 190,503 gallons of wastewater and averaged 4,431 gpd. From 1 November to 31 December 2011 (62 days), the Winery produced a total of 27,247 gallons of wastewater and averaged about 497 gpd to the Land Application Area.

16. Loading estimates for the ten acre vineyard were calculated for all three of the average discharges presented using values for BOD, TDS, and total nitrogen of 6,000 mg/L, 3,000 mg/L, and 50 mg/L, respectively. The results indicate that BOD concentrations range from as low as 2.5 pounds per acre per day (lbs/ac/day) during the post crush period to as high as 22.2 pounds per acre per day (lbs/ac/day) during the crush. TDS loading is estimated to be 77 pounds per acre per year (lbs/ac/yr) during the post crush period to 754 lbs/ac/yr during the crush. Total nitrogen will be added at rates ranging from 1.3 lbs/ac/yr during the post crush period to 12.6 lbs/ac/yr during the crush. The estimated values indicate the loading potential of the discharge is low mostly due to the small volume discharged to the Land Application Area.

Proposed Discharge

17. The 342,000 gallons of wastewater generated in 2011 occurred during what the Winery described as a "short crop" year, and it only crushed about 675 tons of grapes in 2011, but it has the capacity to crush up to 825 tons a season. Quady estimates it would produce about 425,000 to 430,000 gallons of wastewater annually and is requesting a discharge limit of 450,000 of gallons of wastewater (includes about 50,000 gallons of rain water) per year for land application as irrigation water in its vineyard. Estimating the loading to the 6.5 acres of available vineyard by using the anticipated highest flows produced during the crush, results in the discharge adding 42 pounds per acre per day (lbs/ac/day) of BOD, 1,441 pounds per acre per year (lbs/ac/yr) of TDS, and 24 lbs/ac/yr of total nitrogen.

18. Based on the available acreage, the amount of effluent to be discharged, and the overall anticipated effluent quality, the proposed increase should not have an adverse impact on the underlying groundwater quality and/or create nuisance conditions.

Site-Specific Conditions

19. The Madera area is characterized by hot, dry summers and cool winters. The rainy season generally extends from November through March. Occasional rains occur during the spring and fall months, but summer months are dry. Average annual precipitation and evapotranspiration in the discharge area are approximately 12 and 66 inches, respectively, according to information published by the California Department of Water Resources (DWR). The precipitation for a 100-year rainfall return period is 22 inches.

20. The predominant soils in the area of the Winery and the Land Application Area are classified as the Tujunga loamy sands (about 42 percent of the 20 acres) and the Grangeville fine sandy loam, according to the United States Department of Agriculture Natural Resources Conservation Service (USDA/NRCS) *Web Soil Survey, 2012.*

21. The Tujunga Series is described by the USDA/NRCS as somewhat excessively drained with high to very high capacity to transmit water (5.95 to 19.98 inches per hour) and has an irrigated land capability classification of 3e. The Class 3 designation indicates the soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both. The e subclass indicates that the main hazard is the risk of erosion unless close growing plant cover is maintained. The Land Application Area is a vineyard with a cover crop grown in the rows between the vines.

22. The Grangeville fine sandy loam is described by the USDA/NRCS as somewhat poorly drained with high capacity to transmit water (1.98 to 5.95 inches per hour) that has an

irrigated capability rating of 1 (one). The Class 1 designation means these soils have few limitations that restrict their use.

23. The Winery property is not within a 100-year floodplain according to Federal Emergency Management Agency Map 06039C1155E. The Winery is about 2 miles south of a flood plain shown for the Fresno River. Surface water drains typically to the west/southwest in the vicinity of the Winery.

24. The land use in the vicinity of the Winery is primarily agricultural and industrial, with some residential usage to the north/northeast. Agricultural fields are present to the west and south, while rural residences are interspersed with agricultural fields to the north/northwest. Residential subdivisions of the City of Madera are about 1 mile northeast of the Winery. Constellation Wines, U.S. (Constellation), owns and operates the Mission Bell Winery directly southeast of the Quady Winery (Attachment B). Constellations wastewater Land Application Areas are to the south, southwest, and southeast of the Quady Winery. Constellation has five lined evaporation ponds to the southeast and upgradient of the Quady Winery. The Madera Glass Company is directly south of the Constellation facility and about a half mile south of the Quady Winery. The former Oberti Olive facility and the old brine ponds are about 2.5 miles east of the Quady Winery.

Groundwater Considerations

25. The Winery does not have an existing groundwater monitoring well network around its facility. However, Constellation has a groundwater monitoring well network for its operations. The depth to first encountered groundwater in 2011 was about 140 feet below the ground surface (bgs) and the direction of flow was to the west/northwest.

26. One of Constellation's wells, MW-15R, is directly adjacent the southwest corner of the Quady Winery vineyard that is used for the disposal of its wastewater. The electrical conductivity (EC) of groundwater in MW-15R has averaged about 675 micromhos per centimeter (umhos/cm) with TDS, sodium and chloride averaging 470, 47 and 55 mg/L, respectively.

27. Constellation has two wells that are upgradient of its facility, MW-4R and MW-18 that serve as background wells. Water quality for these wells is summarized in the following table.

BACKGROUND GROUNDWATER QUALITY

Constituent	EC	TDS	Nitrate as N	Chloride	Sulfate
Units	umhos/cm	mg/L	mg/L	mg/L	mg/L
Range	700 - 850	500 – 580	5 to 13	27 to 80	29 - 65
Average	805	547	7.5	50	

28. The Quady Winery will not be required to conduct groundwater monitoring at this time. This Order requires wastewater effluent monitoring. Should constituent concentrations of the discharge exceed those described in Finding 16, the monitoring and reporting program will be modified to require a groundwater monitoring evaluation work plan to evaluate any potential impact from the Winery discharge.

Source Water Quality

29. Source water is supplied to the Winery by an onsite well. The Winery does not sample its well at this time, but this Order requires annual sampling of the onsite supply well for salinity constituents and nitrogen compounds.

Basin Plan, Beneficial Uses, and Water Quality Objectives

30. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, 4th Edition, revised October 2011* (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting all waters of the basin, and incorporates by reference plans and policies of the State Water Resources Control Board (State Water Board). Pursuant to Section 13263(a) of the Water Code, WDRs must implement the Basin Plan.

31. The Winery and the Land Application Area lie within the San Joaquin Valley Floor Basin, specifically the Madera Hydrologic Area (No. 545.2), as depicted on interagency hydrologic maps prepared by DWR in 1986. The Basin Plan designates the beneficial uses of groundwater as municipal and domestic supply, agricultural supply, industrial process and service supply.

32. The area around the Winery and Land Application Area regionally drains southwest towards the San Joaquin River, which is about 8 miles south of the Winery. Cottonwood Creek, a tributary to the San Joaquin River is about 2.75 miles south of the Winery. The Basin Plan designates the following beneficial uses for the San Joaquin River: municipal and domestic supply, agricultural supply, industrial process supply,

water contact recreation, non-contact water recreation, warm freshwater habitat, migration of warm and cold water fishes, spawning for warm and cold water fishes, and wildlife habitat.

33. The Basin Plan includes a groundwater water quality objective for chemical constituents that, at a minimum, require waters designated as municipal and municipal supply to meet the State drinking water maximum contaminant levels (MCLs) specified in Title 22, California Code of Regulations (CCR). The Basin Plan recognizes that the Central Valley Water Board may apply limits more stringent than MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.

34. The Basin Plan establishes narrative water quality objectives for Chemical Constituents, Tastes and Odors, and Toxicity. The Toxicity objective, in summary, requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial uses. Quantifying a narrative water quality objective requires a site-specific evaluation of those constituents that have the potential to impact water quality and beneficial uses.

35. The Basin Plan states that when compliance with a narrative objective is required to protect specific beneficial uses, the Central Valley Water Board will, on a case-by-case basis, adopt numerical limitations in order to implement the narrative objective.

36. In the absence of specific numerical water quality limits, the Basin Plan methodology is to consider any relevant published criteria. General salt tolerance guidelines, such as *Water Quality for Agriculture* by Ayers and Westcot and similar references indicate that yield reductions in nearly all crops are not evident when irrigating with water having an EC less than 700 umhos/cm. There is, however, an eight- to ten-fold range in salt tolerance for agricultural crops and the appropriate salinity values to protect agriculture in the Central Valley are considered on a case-by-case basis. It is possible to achieve full yield potential with waters having EC up to 3,000 umhos/cm if the proper leaching fraction is provided to maintain soil salinity within the tolerance of the crop.

37. The Basin Plan encourages the land application of wastewater and identifies crop irrigation as a land application option where the opportunity exists to replace an existing use or proposed use of fresh water with recycled water.

Antidegradation

38. State Water Board Resolution No. 68-16 ("Policy with Respect to Maintaining High Quality Waters of the State") (hereafter Resolution 68-16) prohibits degradation of groundwater unless it has been shown that:
    a. The degradation is consistent with the maximum benefit to the people of the State;

b. The degradation will not unreasonably affect present and anticipated future beneficial uses;
c. The degradation does not result in water quality less than that prescribed in State and regional policies, including violation of one or more water quality objectives; and
d. The Discharger employs best practicable treatment or control (BPTC) to minimize degradation.

39. Constituents of concern that have the potential to cause degradation of high quality waters include, in part, organics, nutrients, and salts.

a. To reduce the organic load of its discharge, the Winery screens solids from the waste stream and per Provision F.10, will implement best management practices (BMP) measures to evenly distribute the wastewater over the Land Application Area reducing the organic load to the Land Application Area and minimizing the potential for anoxic and reducing conditions in soil. These measures are expected to prevent odor and nuisance conditions and reduce the potential for the degradation of groundwater from organic loading;

b. For nitrogen and nitrates, the application of wastewater at agronomic rates for both nutrient and hydraulic loading should preclude degradation of groundwater to the extent that it exceeds water quality objectives. Nitrogen in the wastewater will be discharged to a vineyard with a cover crop (pasture grasses) that combined can utilize over 100 lbs/ac/yr of nitrogen or more. Loading estimates indicate the proposed discharge will add about 12 lbs/ac/yr during the crush and about 1.3 lbs/ac/yr during the post crush period (Finding 16);

c. Regarding salinity in general, the estimated TDS concentrations will add from about 77 lbs/ac/yr (post crush period) up to 754 lbs/ac/yr of salt during the crush to the Land Application Areas. The low loading indicates the discharge to the Land Application Areas would be unlikely cause degradation of groundwater above background concentrations and/or in excess of water quality objectives.

40. TDS is composed of both volatile dissolved solids (VDS) and dissolved salts or fixed dissolved solids (FDS). The proportion of VDS to FDS in wastewater varies with the source, but as much as 50 percent of the TDS in winery wastewater may be in the volatile form. The VDS can be biologically treated by soil microorganisms in a well-managed land application system, when wastewater is not over-applied. FDS can be reduced by plant uptake of nutrients, primarily nitrates, phosphorus, and potassium (and to a lesser degree calcium, magnesium, and sulfur).

41. Economic prosperity of valley communities and associated industry is of maximum benefit to the people of the State, and therefore sufficient reason exists to accommodate growth and limited groundwater degradation around the Winery,

provided that the terms of the Basin Plan are met. Degradation of groundwater by some of the typical waste constituents released with discharge from a winery after effective source reduction, treatment, and control, and considering the best efforts of the Discharger and magnitude of degradation, is of maximum benefit to the people of the State.

Treatment and Control Practices

42. The Winery provides, or will provide, treatment and control of the discharge that incorporates:
    a. Screening of solids from the waste stream;
    b. Storage of effluent in a lined sump prior to discharge;
    c. Application of wastewater at rates that will not allow wastewater to stand for more than 48 hours;
    d. At least daily inspection of the Land Application Area during times of discharge;
    e. Preparation of a Wastewater Irrigation Management Plan; and
    f. Appropriate solids disposal practices.

43. These Treatment and Control Practices are reflective of BPTC of the discharge.

Designated Waste and Title 27

44. CWC Section 13173 defines designated waste as either:
    a. Hazardous waste that has been granted a variance from hazardous waste management requirements pursuant to Section 25143 of the Health and Safety Code.
    b. Non-hazardous waste that consists of, or contains, pollutants that, under ambient environmental conditions at a waste management unit, could be released in concentrations exceeding applicable water quality objectives or could reasonably be expected to affect beneficial uses of the waters of the State contained in the appropriate water quality control plan.

45. Unless exempt, release of designated waste is subject to full containment pursuant to the requirements of Title 27, CCR, Section 20005 et seq. (hereafter Title 27). Title 27 Section 20090(b) exempts discharges of designated waste to land from Title 27 containment standards and other Title 27 requirements provided the following conditions are met:
    a. The applicable regional water board has issued WDRs, or waived such issuance;
    b. The discharge is in compliance with the applicable basin plan; and

c. The waste is not hazardous waste and need not be managed according to Title 22, CCR, Division 4.5, Chapter 11, as a hazardous waste.

The reuse or recycling of materials derived from the waste or produced by waste treatment, such as scrap metal, compost, and recycled chemicals is exempt from Title 27 requirements provided that discharges of residual wastes from recycling or treatment operations to land shall be according to applicable provisions of this division.

The discharge of effluent and the operation of treatment or storage facilities associated with a food processing facility is exempt from Title 27, provided any resulting degradation of groundwater is in accordance with the Basin Plan and the waste need not be managed as a hazardous waste. None of the waste regulated by the proposed Order is hazardous waste nor required to be treated as hazardous waste. With screening to remove solids and application at agronomic rates, the discharge authorized by the proposed WDRs will not cause exceedance of groundwater quality objectives and complies with the Antidegradation Policy and is therefore exempt from Title 27.

CEQA

46. Madera County acted as lead agency for the CEQA process, triggered by the application from Quady for a Conditional Use Permit for the expansion in 2008. A negative declaration was certified when Conditional Use Permit 2008-010 was issued on 17 June 2008.

47. This Order includes requirements to protect water quality, including, but not limited to:

    a. Effluent Limitations B.1 and B.2 which establish numerical effluent limitations that are reflective of best practicable treatment for this discharge.

    b. Discharge Specification C.2, which stipulates waste constituents cannot be released or discharged in a concentration or mass that causes violation of this Order's groundwater limitations.

    c. Provision F.12, which requires that the Winery submit and implement a Wastewater Irrigation Management Plan by 1 December 2012.

48. Central Valley Water Board staff reviewed the Mitigated Negative Declaration and concurred that all potential water quality and related nuisance impacts had been mitigated to a less-than-significant level.

General Findings

49. Based on the threat to water quality and complexity of the discharge, the facility is determined to be classified as 2-C. Section 2200 of Title 23, CCR, defines these categories to include any of the following:

a. Category 2 threat to water quality: "Those discharges of waste that could impair the designated beneficial uses of the receiving water, cause short term violation of water quality objectives, cause secondary drinking water standards to be violated, or cause a nuisance."

b. Category C complexity: "Any discharger for which waste discharge requirements have been prescribed pursuant to Section 13263 of the Water Code not included in Category A or Category B as described above. Included are dischargers having no waste treatment systems or that must comply with best management practices, dischargers having passive treatment and disposal systems, or dischargers having waste storage systems with land.

50. Pursuant to CWC Section 13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.

51. The Central Valley Water Board will review this Order periodically and will revise requirements when necessary.

52. CWC Section 13267(b) states that: "In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports."

53. The technical reports required by this Order and the attached Monitoring and Reporting Program No. R5-2012-0108 are necessary to assure compliance with these WDRs. Quady Winery operates the facility that discharges the waste subject to this Order.

54. DWR sets standards for the construction and destruction of groundwater wells, as described in the *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 94-81 (December 1981).* These standards and any more stringent standards adopted by the State or county pursuant to CWC Section 13801, apply to all monitoring wells.

Public Notice

55. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge.

56. The Winery and interested agencies and persons have been notified of the intent to prescribe WDRs for this discharge, and they have been provided an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

57. All comments pertaining to the discharge were heard and considered in a public meeting.

IT IS HEREBY ORDERED that, pursuant to Sections 13263 and 13267 of the CWC, Quady Winery, Inc., and its respective agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the CWC and regulations adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. Discharge of wastes to surface waters or surface water drainage courses is prohibited.

2. Bypass of untreated wastes, except as allowed by Provision E.2 of Standard Provisions and Reporting Requirements, is prohibited.

3. Discharge of waste classified as "hazardous", as defined in Title 23, California Code of Regulations, Section 2510 et seq., is prohibited. Discharge of waste classified as "designated," as defined in CWC Section 13173, in a manner that causes violation of groundwater limitations, is prohibited.

4. Application of wastewater in a manner or location other than that described herein is prohibited.

5. The discharge of winery wastewater to a domestic wastewater treatment system (septic system) is prohibited.

6. The discharge of any water softening ion exchange regeneration brine in the wastewater system is prohibited.

7. Discharge of domestic wastewater to the process wastewater treatment system is prohibited.

8. Discharge of process wastewater to the domestic wastewater treatment system is prohibited.

B. Effluent Limitations

1. The discharge from the Winery to the Land Application Area shall not exceed 450,000 gallons per year.

C. Discharge Specifications

1. The BOD loading to the Land Application Area calculated as a cycle average as determined by the method described in the attached Monitoring and Reporting Program, shall not exceed 100 lbs/acre/day.

2. No waste constituent shall be released or discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of groundwater limitations.

3. Objectionable odors shall not be perceivable beyond the limits of the Winery or Land Application Area at an intensity that creates or threatens to create nuisance conditions.

4. Wastewater treatment, storage, and disposal shall not cause pollution or a nuisance as defined by Water Code section 13050.

5. The discharge shall remain within the permitted waste treatment/containment structures and Land Application Area at all times.

6. All conveyance, treatment, storage, and disposal systems shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

7. Application of wastewater to the Land Application Area shall be at reasonable agronomic rates to preclude degradation of groundwater, considering the crop, soil, climate, and irrigation management system.

8. Any irrigation runoff shall be confined to the Land Application Area and shall not enter any surface water drainage course or storm water drainage system unless the runoff does not pose a public health threat and is authorized by the appropriate regulatory agencies.

9. The discharge of wastewater and the application of solids to the Land Application Area shall be distributed uniformly over the Land Application Area.

10. The Land Application Area shall be managed to prevent breeding of mosquitos. More specifically:

a. All applied wastewater/irrigation water must infiltrate completely within 48-hours;

b. Ditches not serving as wildlife habitat should be maintained free of emergent, marginal, and floating vegetation; and

c. Low-pressure and unpressurized pipeline and ditches accessible to mosquitos shall not be used to store recycled water.

11. The Land Application Area shall be graded to prevent ponding along public roads or other public areas and prevent runoff onto adjacent properties.

12. Storage of pomace and/or diatomaceous earth on areas not equipped with means to prevent storm water infiltration, must be covered prior to and during forecasted rainfall events to preclude leachate generation.

D. Solids Specifications

Solids as used in this document, means the residual solids including grape pomace plus diatomaceous earth mixed with grape solids from wine product filtration. Sludge as used in this document, means the solid, semi-solid, and liquid residues produced during the wine making or the cleaning of the wine making equipment.

1. Any handling and storage of solids and sludge shall be temporary, and controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate groundwater limitations of this Order.

2. Any proposed change in solids disposal practices shall be reported to the Executive Officer in writing at least 90 days in advance of the change.

E. Groundwater Limitations

1. Release of waste constituents from any wastewater or storm water collection, treatment, or storage component, or release of waste constituents from discharges to the Land Application Area, shall not cause or contribute to groundwater:

   a. Containing concentrations of constituents in excess of those identified below, or natural background quality, whichever is greater.

      (i) Nitrate as nitrogen of 10 mg/L.

      (ii) Total Coliform Organisms of 2.2 MPN/100 mL.

      (iii) For constituents identified in Title 22, the Primary and Secondary MCLs quantified therein.

b. Containing taste- or odor-producing constituents, toxic substances, or any other constituents, in concentrations that cause nuisance or adversely affect beneficial uses.

F. Provisions

1. The Discharger shall comply with the Standard Provisions and Reporting Requirements for Waste Discharge Requirements, dated 1 March 1991, which are part of this Order. This attachment and its individual paragraphs are referred to as Standard Provisions(s).

2. The Discharger shall comply with MRP No. R5-2012-0108, which is part of this Order, and any revisions thereto as adopted by the Central Valley Water Board or approved by the Executive Officer.

3. Quady shall keep at the Winery a copy of this Order including its MRP, Information Sheet, attachments, and Standard Provisions, for reference by operating personnel. Key operating personnel shall be familiar with its contents.

4. The Winery must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Winery to achieve compliance with the conditions of this Order. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This Provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the Winery only when the operation is necessary to achieve compliance with the conditions of the Order.

5. All technical reports and work plans required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code Sections 6735, 7835, and 7835.1. As required by these laws, completed technical reports and work plans must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.

6. The Winery must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Accordingly, the Winery shall submit to the Central Valley Water Board on or before each report due date the specified document or, if an action is specified, a written report detailing evidence of compliance with the date and task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, plus an estimate of the date when the Winery will be in compliance. The Winery shall notify the Central Valley Water Board by letter when it returns to compliance with the time schedule. Violations

may result in enforcement action, including Central Valley Water Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.

7. In the event of any change in control or ownership of land or waste treatment and storage 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 immediately forwarded to the Central Valley Water Board.

8. To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the address and telephone number of the persons responsible for contact with the Central Valley Water Board and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. If approved by the Executive Officer, the transfer request will be submitted to the Central Valley Water Board for its consideration of transferring the ownership of this Order at one of its regularly scheduled meetings.

9. The Winery shall submit the technical reports and work plans required by this Order for Central Valley Water Board staff consideration and incorporate comments they may have in a timely manner, as appropriate. The Winery shall proceed with all work required by the following provisions by the due dates specified.

10. **By 15 April 2013,** the Winery will submit a Wastewater Irrigation Management Plan report detailing its proposed method to evenly apply its wastewater to the 6.5 acre Land Application Area.

11. A copy of this Order including the MRP, Information Sheet, Attachments, and Standard Provisions, shall be kept at the discharge plant for reference by operating personnel. Key operating personnel shall be familiar with its contents.

12. If the Central Valley Water Board determines that the discharge has a reasonable potential to cause or contribute to an exceedance of a water quality objective, or to create a condition of nuisance or pollution, this Order may be reopened for consideration of additional requirements.

13. The Central Valley Water Board is currently implementing the CV-SALTS initiative to develop a Basin Plan amendment that will establish a salt and nitrate management plan for the Central Valley. Through this effort the Basin Plan will be amended to define how the narrative water quality objectives are to be interpreted for the protection of agricultural use. If new information or evidence indicates that

groundwater limitations different than those prescribed herein are appropriate, this Order will be reopened to incorporate such limits.

14. The Central Valley Water Board will review this Order periodically and will revise requirements when necessary.

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order or with the WDRs may result in the assessment of Administrative Civil Liability of up to $10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

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

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

or will be provided upon request.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 4 October 2012.

Pamela C Creedon

PAMELA C. CREEDON, Executive Officer

Order Attachments:

Monitoring and Reporting Program
A Location Map
B Site Map
Information Sheet
Standard Provisions (1 March 1991)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM R5-2012-0108
FOR
QUADY WINERY, INC.
MADERA COUNTY

This Monitoring and Reporting Program (MRP) is required pursuant to California Water Code (CWC) Section 13267.

The Discharger shall not implement any changes to this MRP unless and until the Central Valley Water Board adopts, or the Executive Officer issues, a revised MRP. Changes to sample location shall be established with concurrence of Central Valley Water Board staff, and a description of the revised stations shall be submitted for approval by the Executive Officer.

All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. All analyses shall be performed in accordance with ***Standard Provisions and Reporting Requirements for Waste Discharge Requirements***, dated 1 March 1991 (Standard Provisions).

Field test instruments (such as pH) may be used provided that: the operator is trained in the proper use of the instrument and each instrument is serviced and/or calibrated at the recommended frequency by the manufacturer or in accordance with manufacturer instructions.

Analytical procedures shall comply with the methods and holding times specified in the following: *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater* (EPA); *Test Methods for Evaluating Solid Waste* (EPA); *Methods for Chemical Analysis of Water and Wastes* (EPA); *Methods for Determination of Inorganic Substances in Environmental Samples* (EPA); *Standard Methods for the Examination of Water and Wastewater* (APHA/AWWA/WEF); and *Soil, Plant and Water Reference Methods for the Western Region* (WREP 125). Approved editions shall be those that are approved for use by the United States Environmental Protection Agency or the California Department of Public Health's Environmental Laboratory Accreditation Program. The Discharger may propose alternative methods for approval by the Executive Officer.

If monitoring consistently shows no significant variation in magnitude of a constituent concentration or parameter after at least 12 months of monitoring, the Discharger may request this MRP be revised to reduce monitoring frequency. The proposal must include adequate technical justification for reduction in monitoring frequency.

A glossary of terms used within this MRP is included on page 7.

EFFLUENT MONITORING

Effluent samples shall be collected just prior to discharge to the land application area. Effluent sampling shall be conducted weekly during the crush period (typically mid-August through October) and monthly the remainder of the year. Effluent monitoring shall include at least the following:

Frequency	Constituent/Parameter	Units	Sample Type
Continuous	Flow	mgd	Calculated[1]
Weekly/Monthly	pH	pH Units	Grab
Weekly/Monthly	EC	umhos/cm	Grab
Weekly/Monthly	TDS	mg/L	24-hour composite
Weekly/Monthly	FDS	mg/L	24-hour composite
Weekly/Monthly	BOD_5	mg/L	24-hour composite
Weekly/Monthly	Nitrate as N	mg/L	24-hour composite
Weekly/Monthly	TKN	mg/L	24-hour composite
Weekly/Monthly	Total Nitrogen	mg/L	Calculated
Annually	General Minerals[2]	mg/L	24-hour composite

1. The collection sump has a capacity of 1,100 gallons. The sump pump turns on automatically when its half full (550 gallons) and pumps the wastewater to the Land Application Area. The cycles are recorded and then the volume of the wastewater discharged to the Land Application Area is calculated based on the number of cycles.
2. Samples for general mineral analysis shall be collected once during the crush period that typically extends from mid-August through October of each year.

SOURCE WATER MONITORING

The Discharger shall collect samples from its supply and analyze them for the constituents shown in the following table.

Frequency	Constituent/Parameter	Units	Sample Type
Semi- Annually[1]	EC	umhos/cm	Grab
Semi- Annually[1]	Nitrate as N	mg/L	Grab
Semi- Annually[1]	TDS	mg/L	Grab
Semi- Annually[1]	TKN	mg/L	Grab
Semi- Annually[1]	Total Nitrogen (equals TKN + Nitrate as N)	mg/L	Calculated
Annually	General Minerals	mg/L	Grab

1. Semi-annually is twice a year, with samples collected in the first quarter (January through March) of the year and the third quarter (July through September) of each year.

LAND APPLICATION AREA MONITORING

The Discharger shall perform the following routine monitoring and loading calculations for the Land Application Area. In addition, the Discharger shall keep a log of routine monitoring observations (e.g., areas of ponding, broken hoses, odors and/or flies within the Land Application Area). Data shall be collected and presented in tabular format and shall include the following:

Frequency	Constituent/Parameter	Units	Sample Type
Daily	Application Area	Field Area/ Acreage	na
Daily	Wastewater Flow	Gallons	Calculated
Daily	Wastewater Loading	Inches/day	Calculated
Daily	Supplemental Irrigation	Gallons	Metered
Daily	Precipitation	Inches	Rain gage[1]
	BOD Loading Rate[2]		
Daily	day of application	lbs/acre	Calculated
Daily	cycle average	lbs/acre-day	Calculated
	Nitrogen Loading		
Monthly	from wastewater[3]	lbs/acre	Calculated
Monthly	from fertilizer	lbs/acre	Calculated
Annually	Cumulative Nitrogen Loading	lbs/acre-year	Calculated
Monthly	Salt Loading	lbs/acre	Calculated
Annually	Cumulative Salt Loading	lbs/acre-year	Calculated

1. National Weather Service data from the nearest weather station is acceptable.
2. Loading rates to be calculated using the applied volume of wastewater, applied acreage, and average of the three most recent concentrations for BOD. The BOD loading rate shall be divided by the #days between applications to determine cycle average.
3. Nitrogen and salt loading shall be calculated using the applied volume of wastewater, applied acreage, and average of the three most recent concentrations for total nitrogen and FDS.

REPORTING

All monitoring results shall be reported in **Quarterly Monitoring Reports** which are due by the first day of the second month after the calendar quarter. Therefore, monitoring reports are due as follows:

First Quarter Monitoring Report	**1 May**
Second Quarter Monitoring Report	**1 August**
Third Quarter Monitoring Report	**1 November**
Fourth Quarter Monitoring Report	**1 February**.

Results of annual monitoring shall be reported in the next quarterly report after the sampling has occurred.

A transmittal letter shall accompany each monitoring report. The transmittal letter shall discuss any exceedances that occurred during the reporting period and all actions taken or

planned for correcting exceedance, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions or a time schedule for implementing the corrective actions, reference to the previous correspondence is satisfactory.

The following information is to be included in all monitoring reports, as well as report transmittal letters:

Quady Winery, Inc.

MRP R5-2012-0108

Contact Information (telephone and e-mail)

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner that illustrates clearly, whether the Discharger complies with waste discharge requirements.

At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). Until such notification is given, the Discharger shall submit hard copy SMRs. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

In addition to the details specified in Standard Provision C.3, monitoring information shall include the method detection limit (MDL) and the Reporting limit (RL) or practical quantitation limit (PQL). If the regulatory limit for a given constituent is less than the RL (or PQL), then any analytical results for that constituent that are below the RL (or PQL) but above the MDL shall be reported and flagged as estimated.

Laboratory analysis reports do not need to be included in the monitoring reports; however, the laboratory reports must be retained for a minimum of three years in accordance with Standard Provision C.3.

All monitoring reports shall comply with the signatory requirements in Standard Provision B.3. Monitoring data or discussions submitted concerning WWTF performance must also be signed and certified by the owner of the Quady Winery. If the owner of the Winery is not in direct line of supervision of the laboratory function for a Discharger conducting any of its own analyses, reports must also be signed and certified by the chief of the laboratory.

All monitoring reports that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1.

A. All Quarterly Monitoring Reports shall include the following:

Wastewater Reporting:

1. The results of effluent monitoring specified on page 2.
2. For each month of the quarter, calculation of the maximum daily and monthly average daily discharge flow to the land application area.
3. For each month of the quarter, calculation of the average monthly total nitrogen concentration in the discharge to the land application area.

Source Water Reporting:

1. The results of source water monitoring (except general minerals) specified on page 2.

Land Application Area Reporting:

1. For each Quarter, the areas of the land application area that received wastewater including the volume applied and the dates it was applied.

B. Fourth Quarter Monitoring Reports, in addition to above, shall include:

Wastewater Treatment Facility Information:

1. The names and general responsibilities of all persons in charge of wastewater treatment and disposal.
2. The names and telephone numbers of persons to contact regarding the application of wastewater for emergency and routine situations.

Source Water Reporting:

1. The results of annual source water monitoring for general minerals.

Land Application Area Reporting:

1. The results of reuse area monitoring specified on pages 3 through 4.
2. Water balances for the annual reporting period based on a calendar year and presented monthly in spreadsheet form. The water balances shall evaluate the following:
   a. Monthly volume of wastewater and freshwater discharged to the land application area.
   b. Area (in acres) of the land application area receiving discharges each month of wastewater and/or freshwater.

d. Monthly average ET_o (observed evapotranspiration) - Information sources include California Irrigation Management Information System (CIMIS) http://www.cimis.water.ca.gov/.

e. Monthly crop uptake for the land application area (cite references for irrigation efficiencies and crop coefficients).

5. Annual BOD, nitrogen, and TDS loading calculations.

The Discharger shall implement the above monitoring program by 1 December 2012.

Ordered by: Pamela C Creedon

PAMELA C. CREEDON, Executive Officer

10-4-2012

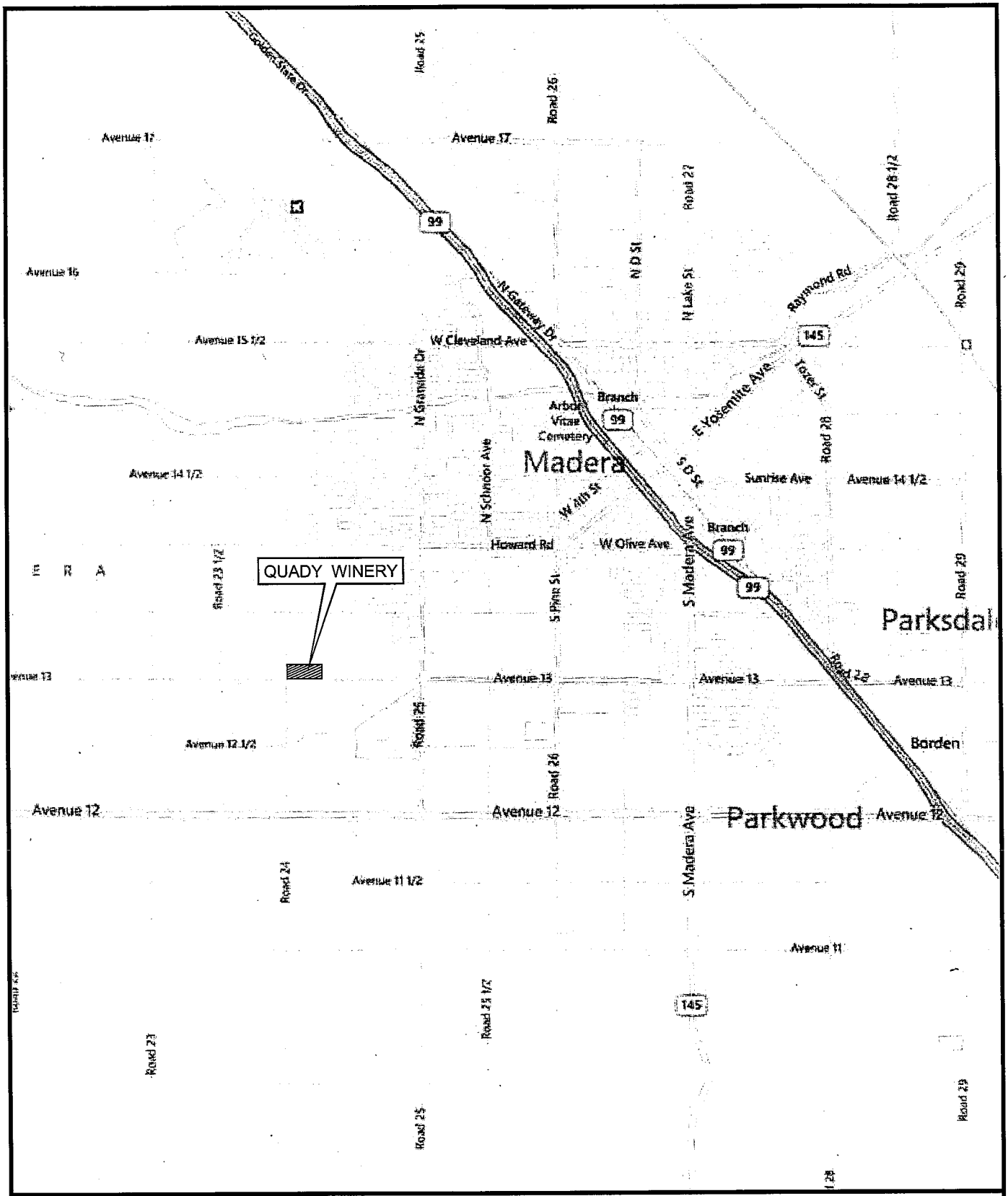
(Date)

GLOSSARY

BOD_5	Five-day biochemical oxygen demand
CBOD	Carbonaceous BOD
DO	Dissolved oxygen
EC	Electrical conductivity at 25° C
FDS	Fixed dissolved solids
NTU	Nephelometric turbidity unit
TKN	Total Kjeldahl nitrogen
TDS	Total dissolved solids
TSS	Total suspended solids
Continuous	The specified parameter shall be measured by a meter continuously.
24-Hour Composite	Samples shall be a flow-proportioned composite consisting of at least eight aliquots.
Daily	Samples shall be collected every day except weekends or holidays.
Twice Weekly	Samples shall be collected at least twice per week on non-consecutive days.
Weekly	Samples shall be collected at least once per week.
Twice Monthly	Sample shall be collected at least twice per month during nonconsecutive weeks.
Monthly	Samples shall be collected at least once per month.
Bi Monthly	Samples shall be collected once every two (i.e., six times per year) during non-consecutive months.
Quarterly	Samples shall be collected at least once per calendar quarter. Unless otherwise approved, samples shall be collected in January, April, July, and October.
Semiannually	Samples shall be collected once every six months (i.e., two times per year). Unless otherwise specified or approved, samples shall be collected in April and October.
Annually	Samples shall be collected at least once per year; in October, unless another month is specified.
mg/L	Milligrams per liter
mL/L	Milliliters [of solids] per liter
µg/L	Micrograms per liter
µmhos/cm	Micromhos per centimeter
mgd	Million gallons per day
MPN/100 mL	Most probable number [of organisms] per 100 milliliters
General Minerals	Analysis for General Minerals shall include at least the following:

Alkalinity	Chloride	Sodium
Bicarbonate	Hardness	Sulfate
Calcium	Magnesium	TDS
Carbonate	Potassium	

General Minerals analyses shall be accompanied by documentation of cation/anion balance.



Map Source:
ESRI's ArcGIS Online Premium Services
Section 27, T11S, R17E, MDB&M

SCALE IN MILES
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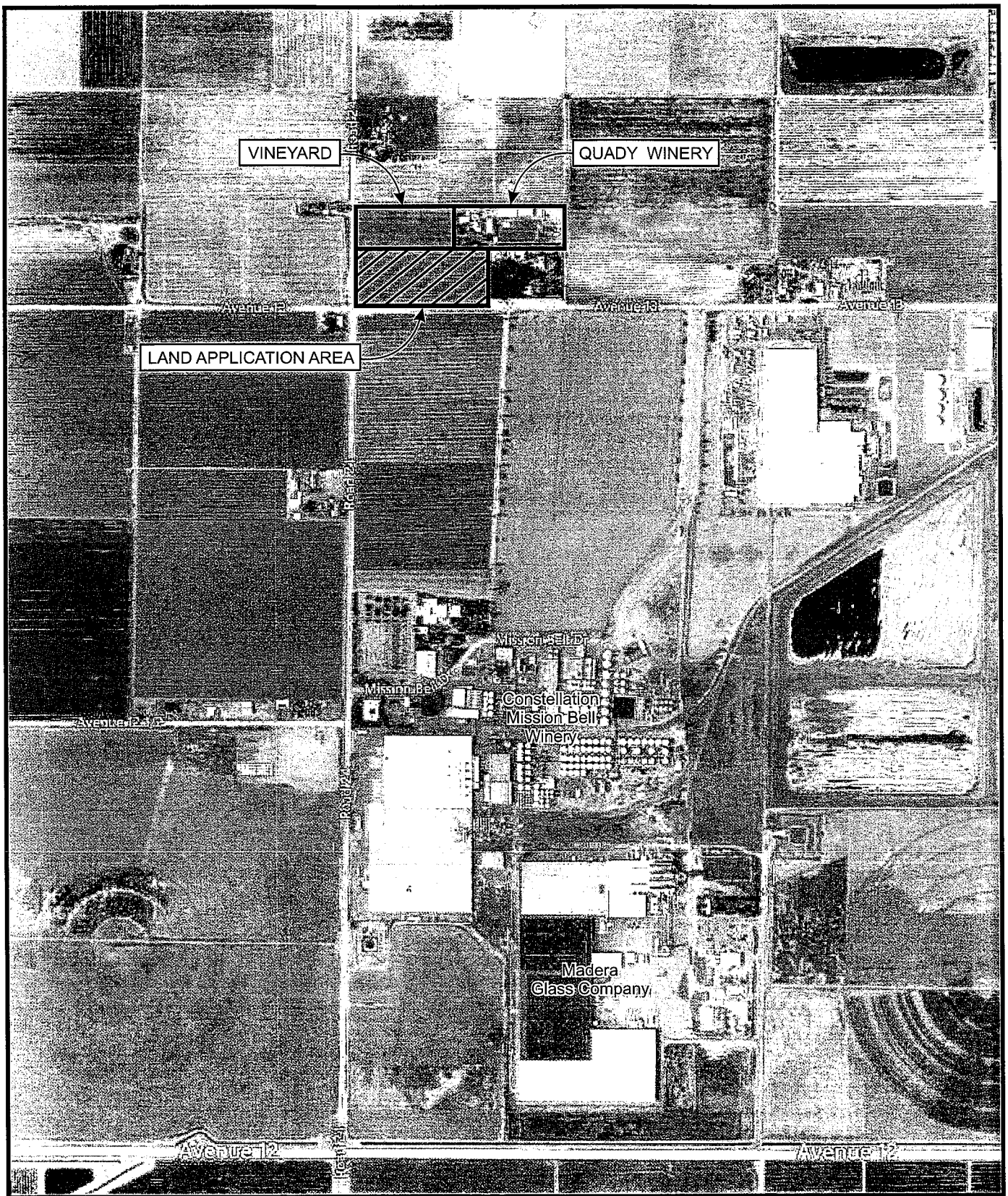
LOCATION MAP
ORDER R5-2012-0108
WASTE DISCHARGE REQUIREMENTS
FOR
QUADY WINERY, INC.
MADERA COUNTY

ATTACHMENT A



Map Source:
ESRI's ArcGIS Online Premium Services
Section 27, T11S, R17E, MDB&M

SCALE IN FEET
0 500 1000

SITE MAP

ORDER R5-2012-0108
WASTE DISCHARGE REQUIREMENTS
FOR
QUADY WINERY, INC.
MADERA COUNTY

ATTACHMENT B

INFORMATION SHEET – ORDER R5-2012-0108
QUADY WINERY, INC.
MADERA COUNTY

Quady Winery, Inc. (Winery) has owned and operated the Quady Winery in Madera County near the City of Madera since 1977. The Winery is at the northwest corner of Road 24 and Avenue 13 and the property contains a total of about 16 acres of land. The Winery property contains a 10 acres grape vineyard, part of which (6.5 acres) is used for the reuse of wastewater. The Winery was regulated by waivers of waste discharge requirements for small food processors since 1997, but submitted a Report of Waste Discharge (RWD) for expansion of the winery in 2008. The higher discharge flows associated with the facility expansion require individual waste discharge requirements (WDRs).

Operations
The winery has the potential to crush up to 825 tons of grapes annually, which would produce about 425,000 gallons of wastewater per year. The majority of the wastewater is produced during the crush season, which is typically from early August through the middle of October, with the majority of the crush being in August and September of each year. There is no distillation at the winery.

Wastewater is screened, routed to a sump, and then to an adjacent vineyard for recycling. The sump is a polyethylene tank enclosed in a concrete secondary containment structure and has a capacity of about 1,100 gallons. A pump turns on automatically when about half full and pumps the wastewater to the vineyard.

The wastewater is primarily wash water generated from the washing of various tanks, barrels, pumps, hoses, and filters, and the surface areas around various wine making areas. More than 10,000 gallons per year is from rinsing new bottles prior to bottling the wine. Various cleansers are used in the cleaning and the sanitation of the wine making equipment.

The ground surfaces around the wine making areas are washed and sanitized between the equipment cleaning events. Several of these areas are outside and the resulting runoff and/or wastewater is routed to area drains and discharged into the sump. In addition, storm water from these surfaces is directed to drains that discharge to the sump. During the wet season, the Winery estimates that an average of 50,000 gallons per year of storm runoff from paved surfaces used for wine processing enters the wastewater sump. The 50,000 gallons of rainwater produced annually is included in the estimated 425,000 gallons of wastewater potentially generated per year.

Wastewater Reuse
The Winery reuses its wastewater to flood irrigate the adjacent 10-acre vineyard designated the Land Application Area, but it reports it only uses about two of the available 10 acres, as the wastewater infiltrates into the subsurface prior to it spreading out over the entire 10 acres due to the small volume and the high permeability of the underlying soils. Additionally, the southern 6.5 acres of the vineyard contain soils that drain well, while the northern 3.5 acres contain soils that cause water to pond. Provision F. 10 of this Order requires the Winery to submit a Wastewater Irrigation Management Plan that will detail its proposed methods to evenly apply its wastewater to the southern 6.5 acre Land Application Area. The flows average about 4,000 gallons per day during the crush and about 500 gallons a day during the remaining nine months of the year.

Solids Disposal
Solids greater than 1/8 inch in diameter are screened out of the wastewater prior to the discharge. The screenings consists of approximately 100 tons of grape pomace plus diatomaceous earth mixed with grape solids from wine product filtration. This material is composted onsite along with approximately 100 tons of purchased manure and used as a soil amendment in the vineyard. The Winery produces about 250 to 400 cubic yards of compost annually.

Based on the requirements presented in Title 14, Section 17855 (a) (4), facilities that produce less than 500 cubic yards of compost annually are exempt from permitting requirements and as such, the Winery does not need a permit for its composting operation.

Groundwater Conditions
The Winery does not have an existing groundwater monitoring well network around its facility. However, Constellation Wines, Inc., operates the Mission Bell Winery that is south/southeast of the Quady Winery and it has a groundwater monitoring well network present for its operations. The depth to first encountered groundwater in 2011 was about 140 feet below the ground surface (bgs) and the direction of flow is to the northwest. Background water quality upgradient off the Mission Bell Winery is good to fair with respect to electrical conductivity as results range from 700 to 850 micromhos per centimeter. Nitrate as nitrogen concentrations range from five to 13 milligrams per liter.

Source Water
The Winery's water source is an on-site well. As the Winery had been operating under a waiver, it was not required to monitor the well and there is no data available for review. This Order contains a requirement to sample the onsite well semi-annually.

Basin Plan, Beneficial Uses, and Regulatory Considerations
The *Water Quality Control Plan for the California Regional Water Quality Control Board Central Valley Region, Fourth Edition* (Basin Plan), designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin. The beneficial uses for the groundwater in the Winery area are municipal and domestic supply, agricultural supply, industrial process and service supply. The beneficial uses for the surface water in the Winery area (San Joaquin River) are municipal and domestic supply, agricultural supply, industrial process supply, water contact recreation, non-contact water recreation, warm freshwater habitat, migration of warm and cold water fishes, spawning for warm and cold water fishes, and wildlife habitat.

Antidegradation
State Water resources Control Board Resolution No. 68-16 (hereafter Resolution 68-16) requires the Regional Water Board to maintain high quality waters of the State until it is demonstrated that any change in quality will be consistent with the maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in State and Regional Water Board policies (e.g., quality that exceeds water quality objectives).

Using the 2011 data, the discharge is estimated to add BOD to the application area at rates ranging from 2.5 to 22.2 pounds per acre per day (lbs/ac/day). Total dissolved solids loading rates range from 85 to 754 pounds per acre per year (lbs/ac/yr) and total nitrogen loading rates range from 1.4 to 12.6 lbs/ac/yr. Based on these low numbers, the discharge has a very low potential to degrade the underlying groundwater.

Title 27
Title 27, CCR, Section 20005 et seq. (Title 27) contains regulations to address certain discharges to land. Unless exempt, release of designated waste is subject to full containment pursuant to Title 27 requirements. Here, the discharge is exempt from the requirements of Title 27 pursuant to provisions that exempt wastewater and reuse. Title 27, section 20090 states in part:

> The following activities shall be exempt from the SWRCB-promulgated provisions of this subdivision, so long as the activity meets, and continues to meet, all preconditions listed:
>
> ...
>
> (b) Wastewater - Discharges of wastewater to land, including but not limited to evaporation ponds, percolation ponds, or subsurface leachfields if the following conditions are met:
>
> (1) the applicable RWQCB has issued WDRs, reclamation requirements, or waived such issuance;

(2) the discharge is in compliance with the applicable water quality control plan; and

(3) the wastewater does not need to be managed according to Chapter 11, Division 4.5, Title 22 of this code as a hazardous waste.

...

(h) Reuse - Recycling or other use of materials salvaged from waste, or produced by waste treatment, such as scrap metal, compost, and recycled chemicals, provided that discharges of residual wastes from recycling or treatment operations to land shall be according to applicable provisions of this division.

CEQA
Madera County issued a Conditional Use Permit for the proposed increase in flow in 2008. A negative declaration was certified when Conditional Use Permit 2008-010 was issued on 17 June 2008.

Order Terms and Conditions

Discharge Prohibitions, Effluent Limitations, Discharge Specifications, and Provisions
The Order prohibits discharge to surface waters and water drainage courses.

The Order prescribes effluent limits that restrict the discharge to no more than 450,000 gallons per year.

The WDRs prescribe groundwater limitations that implement water quality objectives for groundwater from the Basin Plan. The limitations require that the discharge not cause or contribute to exceedance of these objectives or natural background water quality, whichever is greatest.

Monitoring Requirements
Section 13267 of the CWC authorizes the Central Valley Water Board to require monitoring and technical reports as necessary to investigate the impact of a waste discharge on waters of the State. In recent years there has been an increased emphasis on obtaining all necessary information, assuring the information is timely as well as representative and accurate, and thereby improving accountability of any discharger for meeting the conditions of discharge. Section 13268 of the CWC authorizes assessment of civil administrative liability where appropriate.

The proposed Order includes effluent, water supply, and Land Application Area monitoring. The monitoring is necessary to evaluate the extent of the potential degradation from the discharge.

Reopener

The conditions of discharge in the proposed Order were developed based on currently available technical information and applicable water quality laws, regulations, policies, and plans, and are intended to assure conformance with them. The Order sets limitations based on the information provided thus far. If applicable laws and regulations change, or once new information is obtained that will change the overall discharge and its potential to impact groundwater, it may be appropriate to reopen the Order.