

**STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
81 Higuera Street, Suite 200
San Luis Obispo, California 93401-5427**

WASTE DISCHARGE REQUIREMENTS ORDER NO. 00-034
Waste Discharger Identification No. 3 409912001

For

**Fetzer Vineyards, Paso Robles Winery
San Luis Obispo County**

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

SITE OWNER AND LOCATION

1. Fetzer Vineyards Inc., Jon Cagliero and Pete Cagliero (hereafter called the Discharger), is constructing a wine processing facility (hereafter called the winery), located at 8998 North River Road, San Luis Obispo County, Southeast of San Miguel as shown on Attachment 1.
2. The Discharger submitted a complete Report of Waste Discharge (ROWD) on December 29, 1999, in accordance with Section 13260 of the California Water Code. The report was filed for authorization to discharge wine processing wastewater. The ROWD includes design specifications for a facultative aerated lagoon treatment system, septic tank leachfield, and a storm water collection system.

PURPOSE OF ORDER

3. The primary objectives of this order are to: 1) Permit the discharge of treated winery wastewater; 2) Establish effluent discharge limits; and 3) Establish a discharge monitoring program to evaluate impacts to water quality.

SITE DESCRIPTION

4. The site is located in Section 27 of Township 25 South, Range 12 East, Mount Diablo Base Meridian.

5. The site is currently used for irrigated alfalfa production. The winery will be built on approximately 10 acres of the 40-acre property. A 150,000 square foot winery will be constructed in four phases over a ten-year period with a final crush capacity of 10,000 tons. Winery waste treatment systems will be constructed to handle the final crush capacity at the ten-year build out.
6. **Wastes and Waste Treatment** - Solids from winemaking process (pomace, lees, seeds etc.) will be applied as soil amendment in the Discharger controlled vineyards or disposed at a solid waste or composting facility.
7. Sanitary wastewater from approximately 15 employees shall be discharged to a conventional septic tank and leachfield system, designed to San Luis Obispo County standards.
8. The winery will process up to 10,000 tons of grapes during the crush period of August to November each year. During the first few years, the winery will process lesser amounts of grapes. Process wastewater will be generated from crushing/pressing, tank, equipment, barrel and floor cleaning. Winery wastewater will be treated in a facultative aerated lagoon treatment system, located onsite. Domestic or sanitary wastewater will not be treated in this system. The treatment system will be constructed

during the summer 2000 and will be sized for the wineries final crush capacity.

9. **Wastewater Treatment** – The process wastewater treatment system will consist of the following features: **Initial Screening**, the wastewater will be screened to remove large particles such as seeds, stems and skins at floor drain inlets; **Pretreatment**, will consist of pH control, a pump station, flow measurement and a solids removal screen for finer particles; **Aerated Lagoons**, will be utilized for wastewater treatment, firewater and irrigation water storage. A process flow diagram is included as Attachment 3.

Facultative Aerated Lagoons – Wastewater treatment will be carried out in two lined treatment ponds. Pond locations are shown on Attachment 1 and 2. The Discharger has designed the ponds for a total detention time of 90 to 120 days for adequate treatment. Additionally, the detention time in the primary pond must be at least 60 days. Since the Discharger will be expanding the winery over several years the treatment ponds have been designed to handle twice the beginning crush capacity of 5,000 tons. Therefore, the pond detention time will be about 210 days until a final crush capacity of 10,000 tons is achieved.

Surface mechanical aerators for the two aeration ponds shall be sized to satisfy biochemical oxygen demand as well as oxygen dispersion requirements. The aerators will be designed to only mix the upper pond layers so a sludge layer can form and anaerobic bacterial can digest the solids.

10. Treated wastewater will be beneficially reused for farm field irrigation controlled by the Discharger (see Attachment 4). Fetzner Vineyards and Cagliero Ranches have agreed to pump the treated wastewater to Cagliero's irrigation pond for re-use. Table 1 shows the wastewater flow rates.

Table 1
Wastewater Discharge Flowrates Phases I, II

| Discharge Type | Flow Rates |
|--|-------------------|
| Annual Daily Flow (gal/day) | 8,770 (Phase I) |
| | 17,450 (Phase II) |
| Average Day Harvest Flow Aug – Sep (gal/day) | 18,580 (Phase I) |
| | 37,160 (Phase II) |
| Peak Day Crush Flow (gal/day) | 24,000 (Phase I) |
| | 48,000 (Phase II) |

The expected wastewater characteristics are as follows:

Table 2
Expected Wastewater Characteristics

| Constituent | Concentration (mg/l) |
|---------------------------------|----------------------|
| BOD ₅ | 5,000-25,000 |
| TSS | 1,000 |
| pH | 2.5-11.0 |
| TDS | 80-2900 |
| Nitrates | .5-4.8 |
| Sodium | 35-200 |
| Chloride | 3-250 |
| Dissolved Oxygen | .5 - 10 |
| C.O.D. | 800-15,000 |
| Grease | 5-50 |
| Alkalinity (CaCO ₃) | 10-730 |
| VSS | 80-700 |
| Phosphorus | 1-40 |
| Sulfate | 10-75 |

GEOLOGY

11. **Setting** – The site is located in the Salinas River rural area. The property is situated adjacent to the Estrella River, which drains westward to the Salinas River. The Estrella River drainage serves as a ground water recharge zone and is used for domestic and agricultural supply.
12. **Soil Characteristics** – Site topography is level to very gently sloping. Soil types consist of Hanford and Greenfield gravely sandy loams. The soils are moderately drained with low erodability and have a low shrink swell potential. San Luis Obispo County determined soils to be suitable for wastewater disposal.

SURFACE AND GROUND WATER

13. **Surface Water** – The project is located in the Estrella River Hydrologic unit. The entire site drains to the Estrella River, which flows into the Salinas River. The Estrella River is characterized as an intermittent stream with major flows during the rainy season. It is mainly dry the rest of the year. The site and its facilities are protected from washout or erosion from a 100-year flood.
14. The mean annual precipitation was calculated to be 15.2 inches based on data provided by the Discharger. The 100 year, 24-hour storm event intensity was estimated to be two inches/hour. The facility has been designed to handle rainfall from 100-year 24-hour storm events. Rainfall amounts have been in excess of 30 inches during El Niño rain years.
15. **Storm Water** – Federal Regulations for storm water discharges were promulgated by the U.S. EPA on November 19, 1990. The regulations [40 Code of Federal Regulations (CFR) Parts 122, 123, and 124] require specific categories of industrial activities (including winery activities) which discharge storm water associated with industrial activities to obtain a NPDES permit and to implement Best Management Practices to control pollutants in industrial storm water discharges.
16. **Ground Water** – Based on drilling logs supplied by the Discharger, the site is underlain

by a series of aquifers separated by clay aquitards. The main aquifer appears to consist of sand, gravel and to a lesser extent rock. Depth to shallow ground water has not been established for the site. Depth to ground water in the onsite supply well is approximately 200 feet. The closest offsite well to the wastewater irrigation ponds is 925 feet to the Northwest. A second onsite well is located 750 feet from the septic leachfield area and 900 feet from the wastewater ponds. All wells are shown on Attachment 2. Ground water flow direction is to the Northwest (see Attachment 2).

17. Onsite storm water runoff that commingles with winery process water is regulated under this discharge permit. Storm water associated with winery activities which does not come in contact with winery process water is regulated by the State Water Resources Control Board's (State Board) General Permit for Discharges of Storm Water Associated with Industrial Activities (NPDES General Permit No. CAS000001, Water Quality Order No. 97-03-DWQ).
18. **Background water quality** – The onsite groundwater supply well provides the following water quality data:

Table 3
Water Quality Data

| Sample Description | Result (units vary) |
|--|---------------------|
| pH | 7.8 |
| TDS (Total Dissolved Solids) | 460 mg/l |
| EC (Electrical Conductivity) | 760 µmhos/cm |
| Alkalinity (mg CaCO ₃ /L) | 190 |
| Hardness (calc. mg eq. CaCO ₃ /L) | 200 |
| Turbidity | 0.7 NTU |
| SO ₄ ⁻ (Sulfate) | 79 |
| NO ₃ -Nitrate (Nitrate) | 19 mg/l |
| NO ₃ -N (Nitrate) | 4.3 mg/l |
| NO ₂ -N (Nitrite) | <0.1 mg/l |
| Cl (Chloride) | 49 mg/l |
| Al (Aluminum) | 0.032 mg/l |
| Barium | 0.13 mg/l |
| Potassium | 1.9 mg/l |
| Silica | 30 mg/l |
| Ca (Calcium) | 32 mg/l |

| Sample Description | Result (units vary) |
|--------------------|---------------------|
| Mg (Magnesium) | 31 mg/l |
| Na (Sodium) | 81 mg/l |
| B (Boron) | 0.55 mg/l |
| Fe (Iron) | 0.025 mg/l |
| Mn (Manganese) | 0.004 mg/l |
| Cu (Copper) | <0.005 mg/l |
| Zn (Zinc) | <0.02 mg/l |

Table 4
Water quality Objectives

| Constituent | Concentration (mg/l) |
|--|----------------------|
| TDS (total dissolved solids) | 925 |
| Cl (Chloride) | 130 |
| SO ₄ ⁻ (Sulfate) | 240 |
| B (Boron) | 0.75 |
| Na (Sodium) | 170 |
| Total Nitrogen (as N) | 3.2 |

19. **Basin Plan** - The Water Quality Control Plan, Central Coast Basin (Basin Plan) was adopted by the Board on November 19, 1989 and approved by the State Board on August 16, 1990. The Board approved amendments to the Basin Plan on February 11, 1994 and September 8, 1994. The Basin Plan incorporates statewide plans and policies by reference and contains a strategy for protecting beneficial uses of State waters.

20. **Beneficial Uses** -The beneficial uses of the Estrella River are as Follows:

The Estrella River has the following Beneficial Uses:

- Municipal & Domestic Supply;
- Agricultural Supply;
- Groundwater Recharge;
- Water Contact Recreation;
- Non-contact Water Recreation;
- Warm Fresh Water Habitat; and
- Spawning, Reproduction, and/or Early Development.

21. Present and Anticipated beneficial uses of ground water near the discharge include:

- Municipal;
- Agricultural;
- Domestic; and
- Industrial Water Supply.

22. **Water Quality Objectives** - Groundwater objectives for the Estrella Sub-Area are:

23. Discharge of Waste is a privilege, not a right, and authorization to discharge is conditional upon the discharge complying with provisions of Division 7 of the California Water Code and any more stringent effluent limitations necessary to implement water quality control plans, to protect beneficial uses, and to prevent nuisance. Compliance with this Order should assume this and mitigate any potential adverse changes in water quality due to discharge.

24. A Negative Declaration for the project was approved by the San Luis Obispo County Planning Commission on September 28, 1998, in accordance with the California Environmental Quality Act (Public Resources Code, Section 21000, et. seq.) and the California Code of Regulations, and determined there are no significant adverse environmental effects or that all potentially significant adverse effects can be avoided through implementation of mitigation measures. Mitigation measures to prevent nuisance and assure protection of beneficial uses of surface and ground waters will be implemented through this Order.

GENERAL FINDINGS

25. On January 26, 2000, the Board notified the Discharger and interested agencies and persons of its intent to issue waste discharge requirements for the discharge and has provided them with a copy of the proposed Order and an opportunity to submit written comments.

26. After considering all comments pertaining to this discharge during a public hearing on May 19, 2000, this Order was found consistent with the above findings.

IT IS HEREBY ORDERED, pursuant to authority in Section 13263 of the California Water Code, Fetzner Vineyards Inc., its agents, successors, and assigns, may discharge wastewater from the Paso Robles Winery, providing compliance is maintained with the following:

(Note: Other prohibitions and conditions, definitions, and the method of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements" dated January 1984.)

A. PROHIBITIONS

1. Discharge of process wastewater to areas other than the fully lined treatment and holding ponds or surrounding agricultural lands controlled by the Discharger is prohibited.
2. Discharge of sanitary waste to areas other than the septic tank/leachfield system disposal area described in Finding No. 7 is prohibited.
3. Discharge of sanitary wastes or any other wastes to the wastewater treatment system, not specified in this Order, is prohibited.
4. Discharge of wastes including overflow, bypass, overspray and runoff from transport, treatment, or disposal systems to adjacent drainageways or properties is prohibited.
5. Discharge of salt brine to the septic system, treatment plant or agricultural land is prohibited.
6. Discharge of pomace, seeds, stems, or accumulated solids from the wastewater facilities to other than pasture areas, vineyards, or an approved solid waste disposal site, is prohibited.
7. Discharge of uncontaminated storm waters to the treatment facilities is prohibited unless adequate capacity is available.
8. Bypass of the treatment facility and discharge of untreated or partially treated wastes directly to the vineyard irrigation areas is prohibited.

9. Discharge of first and second racking lees residue to the process wastewater system, is Prohibited.

B. SPECIFICATIONS

1. Peak seasonal and average annual discharge flows shall not exceed the flows outlined in Table 1, Finding 10.
2. Wastewater discharged to the farm field irrigations areas shall not exceed the following characteristics:

Table 5
Maximum Discharge Concentrations

| Constituent | Concentration (mg/l) |
|--|---------------------------------|
| TDS (total dissolved solids) | Water Supply + 400 mg/l of TDS* |
| BOD ₅ | 90 |
| Cl (Chloride) | 100 |
| SO ₄ ⁻ (Sulfate) | 180 |
| B (Boron) | 0.5 |
| Na (Sodium) | 100 |
| Nitrogen | 2.0 |

* When Water Supply + 400 mg/l exceeds 925 mg/l the limit shall be 925 mg/l.

3. No reclaimed water shall be applied to the vineyard irrigation area in anticipation of or during rainfall, 24 hours after a rainfall, or when soils are saturated.
4. Irrigation of the vineyard shall not cause ponding or runoff of applied treated wastewater.
5. Ground water shall not be measurably impacted as a result of waste disposal.
6. Neither the treatment nor the discharge of waste shall create a pollution, contamination or nuisance, as defined by Section 13050 of the California Water Code (CWC). (H & S.C. Section 5411, CWC Section 13263).
7. Waste shall not be placed in or allowed to contact ponded water from any source whatsoever.

8. Waste shall not be placed where it can be carried from the disposal site and discharged into water of the State or United States.
9. The public shall be excluded from wastewater treatment and disposal areas.
10. The Discharger shall install any reasonable additional ground water monitoring devices required to fulfill the terms of any future Discharge Monitoring Program issued by the Executive Officer. In addition, the Discharger shall maintain all devices or designed features, installed in accordance with this Order such that they continue to operate as intended without interruption.

C. PROVISIONS

1. The Discharger shall comply with all Prohibitions, Specifications and Provisions of this Order. All required submittals must be acceptable to the Executive Officer. Provisions 8 and 17 of the Standard Provisions shall be excluded from this Order.
2. The Discharger must comply with all conditions of these waste discharge requirements. Violations may result in enforcement actions, including Regional Board orders or court orders requiring corrective action or imposing civil monetary liability, or in modification or revocation of these waste discharge requirements by the Regional Board. [CWC Section 13261, 13267, 13263, 13265, 13268, 13300, 13301, 13304, 13340, 13350).
3. All technical and monitoring reports submitted pursuant to this Order are being requested pursuant to Section 13267 of the California Water Code. Failure to submit reports in accordance with schedules established by this Order, attachments to this Order, or failure to submit a report of sufficient technical quality to be acceptable to the Executive Officer may subject the discharger to enforcement action pursuant to Section 13268 of the California Water Code.
4. The Discharger shall comply with "Discharge Monitoring Program No. 00-034", as specified

by the Executive Officer and incorporated as part of this Order.

5. Freeboard shall exceed two feet in wastewater ponds at all times, unless the ponds are specifically designed for a different freeboard.
6. The Discharger shall comply with the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements" dated January, 1984, incorporated as part of this Order.
7. The Discharger shall submit a **Wastewater Treatment System Startup Report**, acceptable to the Executive Officer, that provides as-built drawings and a section describing the various constructed components of the wastewater treatment facility. The report shall also include a discussion on plant startup, operation and effluent water quality.

REPORT DUE DATE: **February 9, 2001**

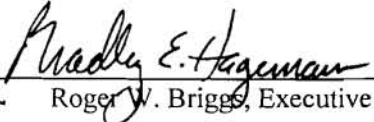
8. The Discharger shall submit a report, acceptable to the Executive Officer, detailing activities to reduce the amount of Total Dissolved Solids generated during the winemaking process. This report shall include an investigation into the sources of TDS, a list of chemicals used at the winery, appropriate substitutes (i.e. ozone treatment), and any recommendations.

REPORT DUE DATE: **April 13, 2001**

9. The Discharger shall submit a written report, acceptable to the Executive Officer, addressing:
 - Whether there will be changes in the continuity, character, location, or volume of the discharge; and,
 - Whether, in their opinion, there is any portion of the Order that is incorrect, obsolete, or otherwise in need of revision.

REPORT DUE DATE: **February 10, 2006**

I, **Roger W. Briggs, Executive Officer**, do hereby certify that the foregoing is a full, complete, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Coast Region, on July 14, 2000.



FWC Roger W. Briggs, Executive Officer

**STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
81 Higuera Street, Suite 200
San Luis Obispo, California 93401-5427**

Monitoring and Reporting Program No. 00-034
Waste Discharger Identification No. 3 409912001

For

**Fetzer Vineyards, Inc., Paso Robles Winery
San Miguel, San Luis Obispo County**

EFFLUENT MONITORING

Attachment A-1 shows sampling locations that correspond to the following requirements:

Representative samples of the treated wastewater applied to the vineyard, shall be collected and analyzed as required by Order No. 00-034.

| Constituent | Units | Sample Type | Minimum Sampling and Analyzing Frequency |
|------------------------|----------|-------------|--|
| Flow to Treatment Pond | gpd | Metered | Daily |
| Grapes Crushed | tons | Measured | Daily During Crush |
| pH | pH units | Metered | Continuous |
| Total Dissolved Solids | mg/l | Grab | Semi-Annually(April-Oct.) |
| Sodium | mg/l | Grab | Semi-Annually(April-Oct.) |
| Chloride | mg/l | Grab | Semi-Annually(April-Oct.) |
| Dissolved Oxygen | mg/l | Grab | Semi-Annually(April-Oct.) |
| Boron | mg/l | Grab | Semi-Annually(April-Oct.) |
| Nitrate as N | mg/l | Grab | Semi-Annually(April-Oct.) |
| BOD ₅ | mg/l | Grab | Semi-Annually(April-Oct.) |
| Sulfate | mg/l | Grab | Semi-Annually(April-Oct.) |

*During periods of irrigation.

WATER SUPPLY MONITORING

Representative samples from the water supply well system shall be collected and analyzed as follows:

| Constituent | Units | Sample Type | Minimum Sampling and Analyzing Frequency |
|------------------------|-------|-------------|--|
| Total Dissolved Solids | mg/l | Grab | Semi-Annual (April – Oct) |
| Sodium | mg/l | Grab | Semi-Annual (April – Oct) |
| Chloride | mg/l | Grab | Semi-Annual (April – Oct) |
| Nitrate as N | mg/l | Grab | Semi-Annual (April – Oct) |
| Boron | mg/l | Grab | Semi-Annual (April – Oct) |
| Sulfate | mg/l | Grab | Semi-Annual (April – Oct) |
| Depth to Ground Water | feet | Measurement | Semi-Annual (April – Oct) |

SOLID WASTE DISPOSAL

A summary of estimated volumes and disposal locations of all solid waste screenings, tank residues, and pond solids disposed shall be included with each monitoring report.

WASTEWATER FACILITIES AND DISPOSAL AREA MONITORING

Wastewater ponds shall be inspected weekly for freeboard and available storage. Freeboard and available storage shall be presented in tabular form in each semi-annual report. Wastewater facilities shall be inspected weekly for evidence of any nuisance condition (odors, vectors, etc.). Conditions of this nature shall be reported to the Executive Officer or his representative and to the County Division of Environmental Health within 24 hours of knowing of such conditions. The incident shall be promptly investigated and remedied. A record shall be kept of dates and nature of observations and remedies.

SEPTIC TANK MONITORING

Annual inventory of solids in the septic treatment system shall be conducted each year.

| <u>Parameter</u> | <u>Units</u> | <u>Type of Measurement</u> | <u>Frequency</u> |
|--|--------------|----------------------------|------------------|
| Flow | gpd | estimated | monthly |
| Sludge Depth and Scum Thickness (June) in each compartment of each tank | feet` | staff gauge | annually |

REPORTING

Reports shall be prepared semiannually and submitted by the 30th of January and July. A yearly summary of data shall accompany the January 30th report. Yearly data shall be submitted in tabular format on a 3.5-inch diskette in Microsoft Excel[®] format. Reports shall contain all data collected or calculated and all observations made during the previous two quarters. It shall also contain a narrative summary of any exceptions to Waste Discharge Requirements. A map or aerial photograph shall accompany each report showing observation and monitoring station locations. Laboratory statements of results of analyses must also be included in each report. A copy of all reports submitted to the Board shall be also submitted to the San Luis Obispo County Division of Environmental Health.

ORDERED BY

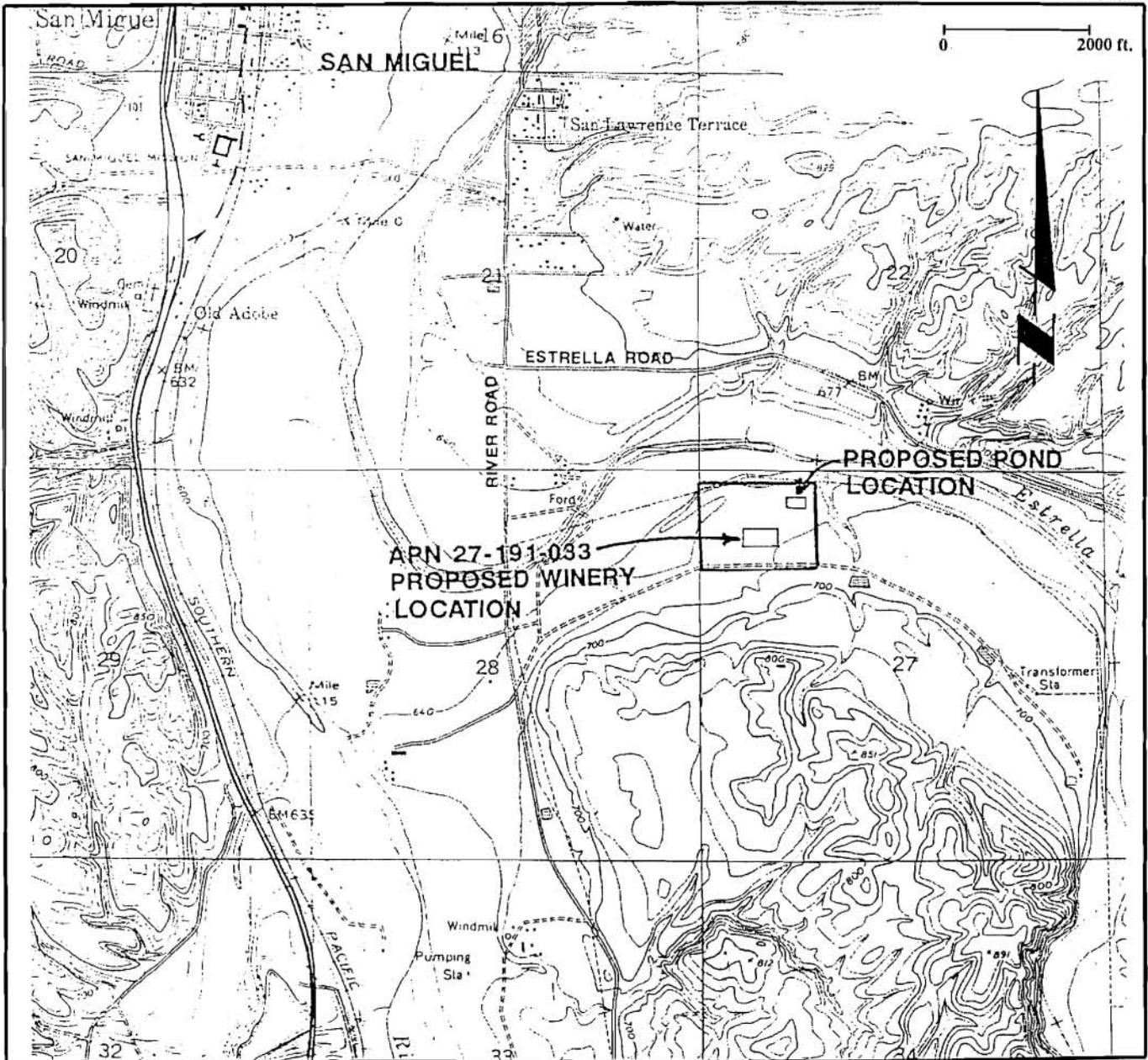
Bradley E. Hageman
 Executive Officer

7/24/2000

Date

Fetzer Vineyards
Paso Robles Winery
Order No. 00-034

Site Location Map

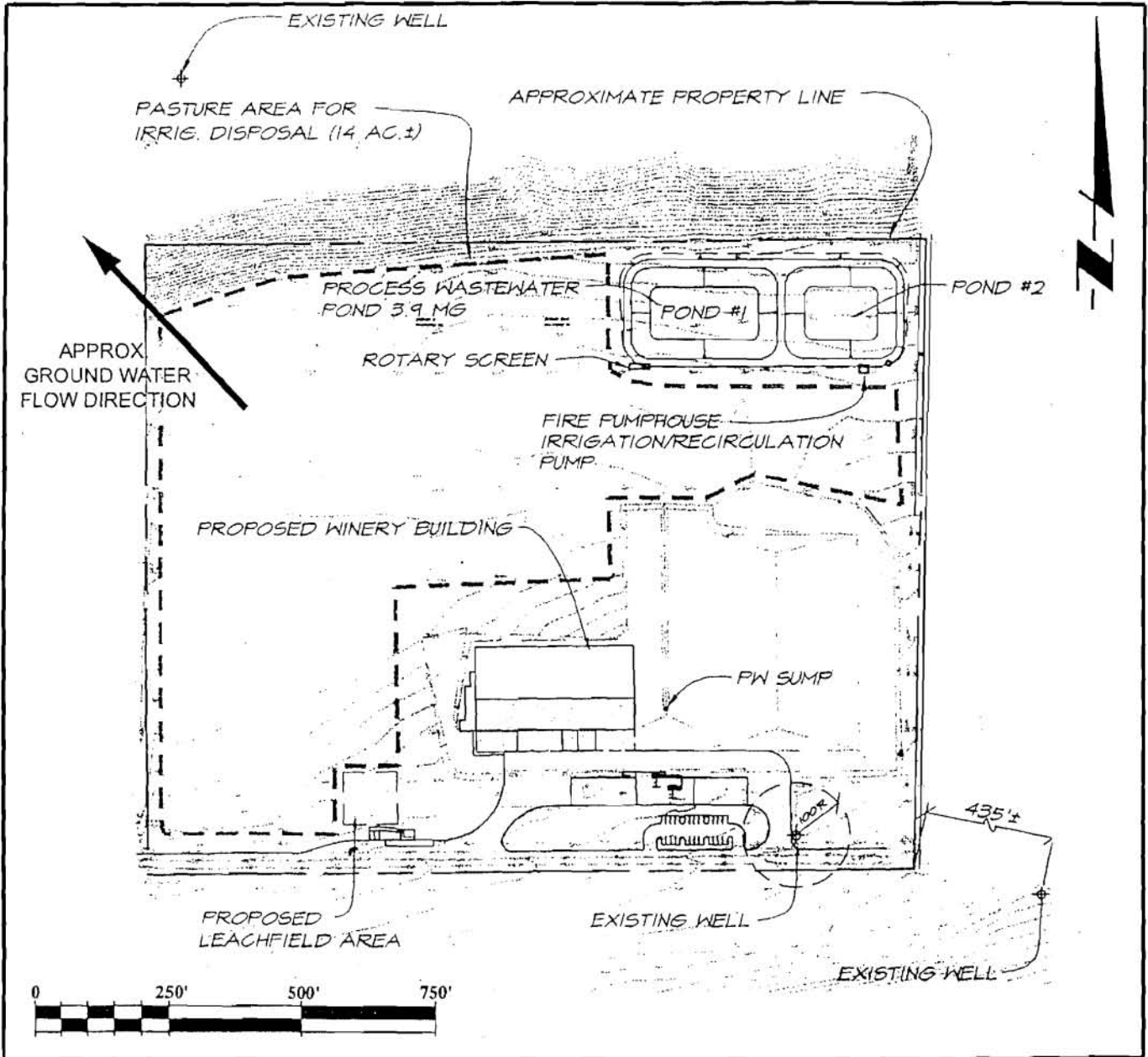


Central Coast Regional
Water Quality Control Board

Attachment 1

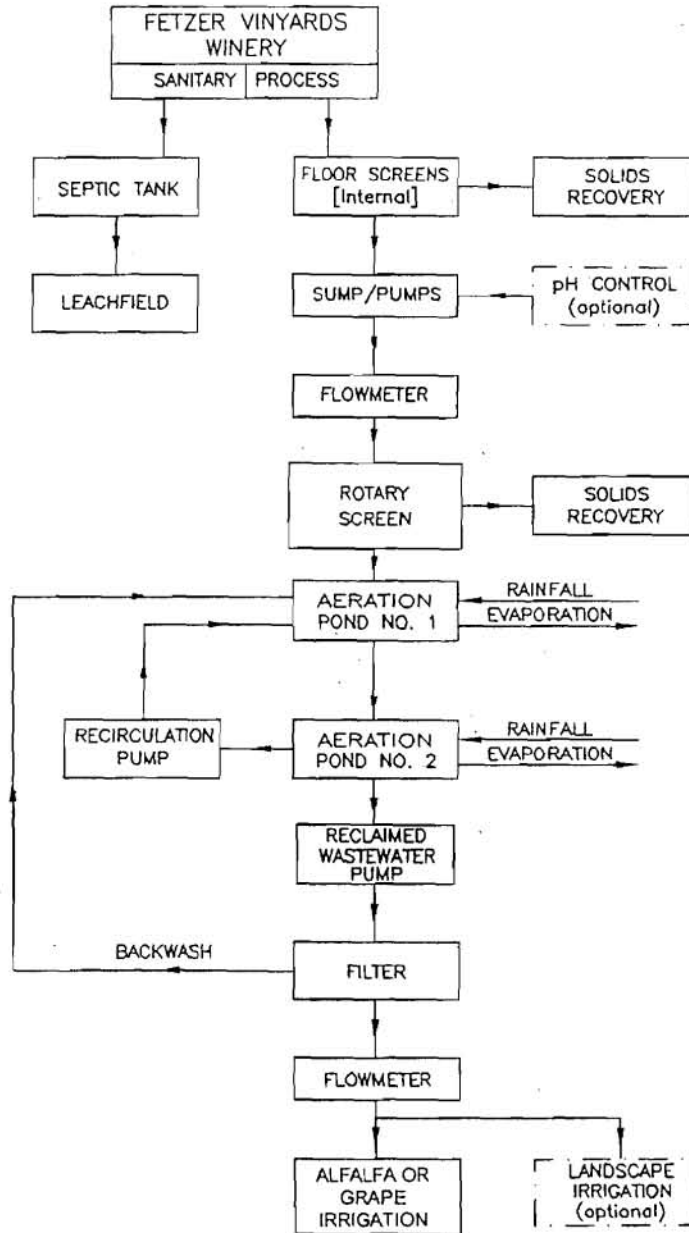
Fetzer Vineyards
Paso Robles Winery
Order No. 00-034

Overall Site Plan



**Fetzer Vineyards
Paso Robles Winery
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Water Management Systems Schematic



NOTES:

1. Sanitary wastewater will be collected separately and conveyed to standard septic tank/leachfield systems and permitted through San Luis Obispo Co.



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