



NAPA COUNTY
CONSERVATION, DEVELOPMENT & PLANNING DEPARTMENT
 1195 Third Street, Suite 210, Napa, California, 94559 • (707) 253-4417

APPLICATION FOR USE PERMIT

FOR OFFICE USE ONLY			
ZONING DISTRICT: <u>AP</u>	Date Submitted: <u>12-17-07</u>		
REQUEST: <u>to expand production from 500,000 to 850,000 gal per yr., upgrade waste water system and expand public viewing deck</u>	Date Complete: _____		
	Date Published: _____		
	<u>ZA</u>	<u>CDPC</u>	<u>BS APPEAL</u>
	Hearing _____	_____	_____
	Action _____	_____	_____

TO BE COMPLETED BY APPLICANT (Please type or print legibly)			
Applicant's Name: <u>Mumm Napa Estates, LLC PERNOD RICARD USA LLC</u>			
Telephone #: <u>(707) 967 - 7700</u>	Fax #: <u>(707) 967 - 7796</u>	E-Mail: <u>kp@fbm.com</u>	
Mailing Address: <u>c/o Katherine Philippakis</u>	<u>889 Adams Street, Suite G</u>	<u>St. Helena</u>	<u>CA 94574</u>
Status of Applicant's Interest in Property: <u>Owner</u>			
Property Owner's Name: <u>Mumm Napa Estates, LLC/Domaine Mumm, Inc.</u>			
Telephone #: <u>(707) 967 - 7700</u>	Fax #: <u>(707) 967 - 7796</u>	E-Mail: <u>rob.mcneill@pernod.ricard.usa.com</u>	
Mailing Address: <u>570 Gateway Drive</u>	<u>Napa</u>	<u>CA</u>	<u>94558</u>
Site Address/Location: <u>8445 Silverado Trail</u>	<u>Rutherford</u>	<u>CA</u>	<u>94573</u>
Assessor's Parcel #: <u>030-200-030</u>	Existing Parcel Size: <u>73.16</u>		
I certify that all the information contained in this application, including but not limited to the information sheet, water supply/waste disposal information sheet, site plan, floor plan, building elevations, water supply/waste disposal system site plan and toxic materials list, is complete and accurate to the best of my knowledge. I hereby authorize such investigations including access to County Assessor's Records as are deemed necessary by the County Planning Division for preparation of reports related to this application, including the right of access to the property involved.			
<u>James R. McNeill</u> <small>Signature of Applicant</small>	<u>12-17-07</u> <small>Date</small>	<u>James R. McNeill</u> <small>Signature of Property Owner</small>	<u>12-17-07</u> <small>Date</small>
<u>James R. McNeill</u> <small>Print Name</small>		<u>James R. McNeill</u> <small>Print Name</small>	

TO BE COMPLETED BY CONSERVATION, DEVELOPMENT AND PLANNING DEPARTMENT			
*Application Fee Deposit: \$ <u>8260.00</u>	Receipt No. <u>66597</u>	Received by: <u>88</u>	Date: <u>12/19/07</u>
*Total Fees will be based on actual time and materials			

**Mumm Napa Estates
Project Statement
(APN 030-200-030)**

The proposed project consists of expansion of production capacity at one of Napa Valley's premier sparkling wine facilities as well as a modest expansion of public viewing decks at the winery's visitor center. The project site is a 73 acre vineyard located at 8445 Silverado Trail, Rutherford.

Mumm Napa Estates has produced world class sparkling wine in the *Methode Champenoise* at the project site since obtaining a use permit in 1987 for grape receiving, production, aging, bottling, selling and shipping of 500,000 gallons of sparkling wine annually as well as for public tasting and tours. Currently, Mumm Napa Estates produces approximately 480,000 gallons of sparkling wine per year. Just as the 1987 permit sought production limits in anticipation of planned growth, so too is the current application submitted in anticipation of further planned, incremental growth to a projected production limit of 850,000 gallons per year, if this application is approved. The proposed production expansion will require upgrading the existing process wastewater treatment facility in two phases: the first phase of improvements will include upgrades to the existing storage ponds to permit production of 700,000 gallons; and the second phase will include a sophisticated membrane biological reactor to permit production of 850,000 gallons, as well as conversion to fermentation of some winery building space presently dedicated to tirage. In addition, Mumm Napa Estates would expand the sanitary sewage leach field to accommodate the modest increase in employees anticipated for the increased production levels. Two new storage sheds ancillary to the expanded production and totaling 3,710 square feet are also proposed new construction, although they are connected to existing structures, have maximum heights of only twenty and twenty-five feet, and the footprints of these structures fall within previously approved expansion areas and result in a total floor area far below the previously approved square footage for the facility. One of the two storage sheds is intended to be temporary and will be demolished when Mumm Napa Estates undertakes final construction of facilities in the previously approved expansion area.

In addition, Mumm Napa Estates would like to add 2,250 feet to a public viewing deck that will be used by the winery's existing visitors. Neither this proposed expansion, nor the proposed production expansion will result in an increase above existing visitation or change to the public tasting and tours. There will, however, be a modest increase in the number of full-time and part-time employees to support the expanded production levels.

The water supply for the expanded winery will come from the existing well on the property. The Water Availability Analysis produced by Summit Engineering indicates that the water consumption falls well below County limits. Water storage for emergency and fire-protection usage will be provided by the existing storage pond.

Process wastewater needs will be accommodated by an expanded process wastewater treatment facility, the precise design of which has not been selected from among three proposed alternatives. Sanitary waste water is handled through an on-site septic system and leachfield which will be expanded to accommodate the increased number of employees.

Actions Requested

This application seeks a major modification to Mumm Napa Estate's existing use permit to allow for expansion of production to its existing winery along with concomitant increases in employees, and a small expansion to a public viewing deck. No other changes to the site are proposed.

Consistency with Adopted Local Plans and Policies

The General Plan land-use designation for the property is Agricultural, and the property is zoned AP, a zoning district intended for the Valley floor. Wineries are a conditional use in this district, subject to the provisions of the Winery Definition Ordinance. The proposed expansion of an existing winery is consistent with both the General Plan land-use designation and with applicable zoning provisions.

Summary

Mumm Napa Estates looks forward to the opportunity to expand their production of premier sparkling wine and to enhance the visitor facilities at its Silverado Trail winery. Because the proposed project will not increase the facility beyond its previously permitted footprint and will not significantly increase traffic, they believe that any impact on the neighborhood from their activity will be negligible. They appreciate the opportunity to apply for this use permit and look forward to working with the County on the processing of their application.

**USE PERMIT APPLICATION
SUPPLEMENTAL INFORMATION SHEET
FOR WINERY USES**

1. **Operations.** (In the blank in front of each operation, place an "E" for Existing, a "P" for Proposed, an "X" for Expanding, or an "N" for None.)

- | | |
|---|---|
| a. <input checked="" type="checkbox"/> crushing | g. <input checked="" type="checkbox"/> underground waste disposal |
| b. <input checked="" type="checkbox"/> fermentation | h. <input checked="" type="checkbox"/> above-ground waste disposal |
| c. <input checked="" type="checkbox"/> barrel ageing | i. <input type="checkbox"/> administration office |
| d. <input checked="" type="checkbox"/> bottling | j. <input type="checkbox"/> laboratories |
| e. <input type="checkbox"/> case goods storage | k. <input type="checkbox"/> daycare |
| f. <input type="checkbox"/> caves: | l. <input type="checkbox"/> tours/tastings: |
| use: | <input type="checkbox"/> public drop-in |
| <input type="checkbox"/> barrel storage | <input type="checkbox"/> public by appointment |
| <input type="checkbox"/> case goods storage | <input type="checkbox"/> wine trade |
| <input type="checkbox"/> other _____ | m. <input type="checkbox"/> retail wine sales |
| accessibility to public: | <input type="checkbox"/> public drop-in |
| <input type="checkbox"/> none – no visitors/tours/events | <input type="checkbox"/> public by appointment |
| <input type="checkbox"/> guided tours only | n. <input type="checkbox"/> public display of art or wine-related items |
| <input type="checkbox"/> public access – no guides/unescorted | o. <input type="checkbox"/> food preparation |
| <input type="checkbox"/> marketing events and/or temporary events | |

2. **Marketing Activities.** (Describe the nature of any marketing or educational events not listed above including the type of events, whether public or private, frequency of events, average attendance, etc. Differentiate between existing and proposed activities. Attach additional sheets if necessary): No change proposed.

3. **Food Service.** (Describe the nature of any food service including type of food, whether public or private, whether profit or non-profit, frequency of service, whether prepared on site or not, kitchen equipment, eating facilities, etc. Differentiate between existing and proposed food service. Attach additional sheets if necessary): No change proposed.

4. **Production Capacity.**

- a. existing capacity: 500,000 date authorized: July 15, 1987
- b. current maximum actual production (year): 480,000 (2006)
- c. proposed capacity: 850,000

5. **Grape Origin.** (Fill out a "Initial Statement of Grape Source" form if establishing a new winery or expanding an existing winery development area and include with application form.)

6. **Winery Development Area.** (see **a** below - for existing winery facilities)
Will the project involve construction of additional facilities beyond the winery development area? No

7. **Total Winery Coverage.** (see **b** below – maximum 25% of parcel or 15 acres, whichever is less)
 - a. square feet/acres: 410,089/9.4 acres
 - b. percent of total parcel: 12.87%

8. **Production Facility.** (see **c** below – include the square footage of all floors for each structure)
 - a. square feet: 137,487

9. **Accessory Use.** (see **d** below – maximum permitted 40% of the production facility)
 - a. square feet: 20,772
 - b. percent of production facility: 15.11%

Marketing Definition: (paraphrased from County Code)

Marketing of Wine – Any activity conducted at the winery shall be limited to members of the wine trade, persons, who have pre-established business or personal relationships with the winery or its owners, or members of a particular group for which the activity is being conducted on a prearranged basis. Marketing of wine is limited to activities for the education and development of the persons or groups listed above with respect to wine which can be sold at the winery on a retail basis and may include food service without charge except to the extent of cost recovery when provided in association with such education and development but shall not include cultural and social events unrelated to such education and development.

Coverage and Use Definitions: (paraphrased from County Code)

- a. **Winery Development Area** – All aggregate paved or impervious or semi-permeable ground surface areas of the production facility which includes all storage areas (except caves), offices, laboratories, kitchens, tasting rooms and paved parking areas for the exclusive use of winery employees.

- b. **Winery Coverage** – The total square foot area of all winery building footprints, all aggregate paved or impervious ground surface areas of the production facility which includes all outside work, tank and storage areas (except caves); all paved areas including parking and loading areas, walkways, and access driveways to public or private roads or rights-of-way; and all above-ground wastewater and run-off treatment systems.

- c. **Production Facility** – (For the purpose to calculate the maximum allowable accessory use) The total square footage of all winery crushing, fermenting, bottling, bulk and bottle storage, shipping, receiving, laboratory, equipment storage and maintenance facilities, and employee-designated restrooms but does not include wastewater treatment or disposal areas which cannot be used for agricultural purposes.

- d. **Accessory Use** - The total square footage of area within winery structures used for accessory uses related to a winery that are not defined as "production facility" which would include offices, lobbies/waiting rooms, conference/meeting rooms, non-production access hallways, kitchens, tasting rooms (private and public areas), retail space areas, libraries, non-employee designated restrooms, art display areas, or any area within winery structures not directly related to wine production.

WINERY CALCULATION WORKSHEET

1. WINERY COVERAGE

All paved or impervious ground surface areas of the production facility:

Footprint of all winery structures	126,647
Visitor Center	8,637
Winery	93,310
Winery Expansion	24,700
Outside work areas	37,311
Courtyard	33,509
Slab	3,802
Tank areas	1,340
Slab	1,340
Storage areas (excluding caves)	3,710
(P) shed 1	1,750
(P) shed 2	1,960

All paved areas:

Parking areas	71,435
Parking 1 (visitor)	42,473
Parking 2 (visitor)	622
Parking 3 (Employee)	3,026
Parking 4 (Employee)	1,225
Roadway 5 (employee)	2,981
Parking expansion	21,108
Loading areas	9,492
Roadway 6	9,492
Walkways	10,058
Concrete 1 (at visitor center)	7,090
Concrete 2 (at visitor center)	437
Concrete 3 (at visitor center)	281
(P) Deck Expansion	2,250
Access driveways to the public or private rd	41,956
Roadway 1 (visitor center)	19,774
Roadway 2 (Driveway toward winery)	14,572
Roadway 3 (access to employee pkg)	5,527
Roadway 4 (access to employee pkg)	2,083

Above-ground wastewater and run-off treatment systems:

Wastewater pond or SDD	103,140
(P) Pretreatment MBR	5,000
Spray disposal field	46 acres (not included in winery impervious coverage calc)

Parcel size: 73.16

Total winery coverage: 9.41

Percent of winery coverage of parcel size: 12.87%

2. PRODUCTION FACILITY

Total square footage within structures and caves utilized for the following:

Crushing	
Fermenting	60,855
Malolactic (A3)	2,713
Fermentation 101 (A3)	10,960
Future Fermentation (A2)	5,062

Fermentation (A2)	12,742
Stairs Near Fermentation & Closet (A2)	80
Corridor Near Fermentation (A2)	888
(P) winery expansion	24,700
(P) shed 1	1,750
(P) shed 2	1,960
Bottling	13110
Label Storage (A3)	330
Chem (A2)	156
Sample Rm (A2)	208
CIP (A2)	156
Storage (A2)	143
Tierage Line (A2)	2,862
Rm 139 (A2)	144
Prod. Mgr (A2)	154
Disgorging Packaging (A2)	5,578
Staging (A2)	863
Cold Rm (A2)	370
Closet in Disgorging Packing Area (A2)	88
Corridor (A2)	2,058
Bulk & bottle storage	52039
Storage Room 1 (A3)	300
Storage Room 2 (A3)	144
Storage Room 3 (A3)	630
Storage Room 4 (A3)	36
Storage Room 5 (A3)	36
Transfer (A2)	2,843
Man. Rid. (A2)	1,248
Electrical (A2)	207
Storage (A2)	247
Case Goods (A2)	2,866
Dry Goods (A2)	7,233
Corridor (A2)	3,290
Tierage 1 (A3)	5,650
Tierage 2 (A3)	5,600
Tierage 3 (A3)	5,750
Future Tierage 4 (A3)	5,700
Future Tierage 5 (A3)	6,272
Gyro 1 (A3)	1,968
Gyro 2 (A3)	2,019
Shipping	270
Rm 17 (A2)	150
Stairs Next to Dry Goods (A2)	40
Rm 39 (A2)	80
Receiving	5,506
Press Area (A3)	4,245
Empty Boxes (A3)	459
Empty Boxes (A3)	425
Full Boxes (A3)	247
Scale house (A3)	130
Laboratory	1615
Lab 1 (A3)	108

Lab 2 (A3)	120
Lab 3 (A3)	156
Lab 4 (A3)	520
Lab 5 (A3)	431
Lab 6 (A3)	260
Closet Next to 212 & 213 (A3)	20
Equipment storage & maintenance facilities (excludes fire protection facilities)	2947
Rm 1 (A3)	168
Grounds Keeper (A2)	192
Water Pump House (A2)	256
Air Comp. (A2)	176
Yeast (A2)	355
Chem. (A2)	220
Mech. (A2)	570
Shop (A2)	652
Parts (A2)	286
Rm. 18 (A2)	72
Employee-designated restrooms	1145
Break (A2)	491
Rm 15 (A2)	277
Rm 16 (A2)	277
Rm 1 (A3)	84
Closet In Break Room	16

Total square footage of production facility: 137,487

3. ACCESSORY USE

Total square footage within structures and caves utilized for the following:

Office space	3790
Gen. Mgr. (A3)	352
Control (A3)	192
Office (A3)	192
Corp. (A3)	165
VR Tech. Serv. (A3)	165
Comm. (A3)	224
Rm. 98 (A3)	70
Mezz. Future (A3)	360
Restroom 1 (A3)	96
Restroom 2 (A3)	96
Storage 1 (A3)	36
Storage 2 (A3)	36
Hall/Secretary/Storage (A3)	1,806
Lobbies/waiting rooms	1081
Reception (A3)	440
Entry Loggia (A2.1)	641
Conference/meeting rooms	400
Conference (A3)	400
Non-production access hallways	11086
Stairs Near Tour Corridor (A3)	207
Tour Corridor (A3)	7,384
Tour Balcony (A3)	2,872

Stairs At Tour Balcony (A3)	160
Corridor adjacent to entry and restroom (A2.1)	200
Portico (A2.1)	263
Kitchens	126
Kitchen (A2.1)	126
Tasting rooms (private & public areas)	2,323
Tasting Porch (A2.1)	1,885
Dining (A2.1)	438
Retail space areas	1009
Room 1 (A3)	88
Merchandising (A2.1)	921
Libraries	
Visitor restrooms	356
Men's Restroom (A2.1)	159
Women's Restroom (A2.1)	197
Art display areas	
Any other areas within the winery structure not directly related to production	601
Service (A2.1)	253
Sales Storage (A2.1)	90
Storage (A2.1)	90
Service Yard (A2.1)	168

Total square footage of accessory use space: 20,772

Percent of accessory use to production use: 15.11%

INFORMATION SHEET

I. USE

- A. Description of Proposed Use (attached detailed description as necessary) (including where appropriate product/service provided): Expanded production capacity; upgraded wastewater system; expanded public viewing deck.
- B. Project Phases: ☐ one ☒ two ☐ more than two (please specify): deck/sheds/pond -'08; MBR - '10
- C. Estimated Completion Date for Each Phase: Phase 1: 12/31/2008 Phase 2: 12/31/2010
- D. Actual Construction Time Required for Each Phase: ☒ less than 3 months - Phase 1
☒ More than 3 months - Phase 2
- E. Related Necessary On- And Off-Site Concurrent or Subsequent Projects: None
- F. Additional Licenses/Approval Required:
- District: None Regional: None
State: None Federal: None

II. BUILDINGS/ROADS/DRIVEWAY/LEACH FIELD, ETC.

- A. Floor Area/Impervious area of Project (in square ft): 301,949
Proposed total floor area on site: 158,259
Total development area (building, impervious, leach field, driveway, etc.) 410,089 (incl. pond)
New construction: 10,960
- existing structures or
portions thereof to be
utilized: 101,947
- existing structures or
portions thereof to be
moved: None
- B. Floor Area devoted to each separate use (in square ft):
- living: None storage/warehouse: 52,039 offices: 3,790
sales: 1,009 caves: None other: 101,421
septic/leach field: 81,610 roads/driveways: 41,956
- C. Maximum Building Height: existing structures: 35 new construction: 25
- D. Type of New Construction (e.g., wood-frame): Stone paving - deck; wood frame - sheds
- E. Height of Crane necessary for construction of new buildings (*airport environs*): N/A
- F. Type of Exterior Night Lighting Proposed: N/A
- G. Viewshed Ordinance Applicable (See County Code Section 18.106): Yes ☐ No ☒
- H. Fire Resistivity (check one; If not checked, Fire Department will assume Type V – non rated):
☐ Type I FR ☐ Type II 1 Hr ☐ Type II N (non-rated) ☐ Type III 1 Hr ☐ Type III N
☐ Type IV H.T. (Heavy Timber) ☐ Type V 1 Hr. ☒ Type V (non-rated)
(Reference Table 6 A of the 2001 California Building Code)

III. PARKING

	Existing	Proposed
A. Total On-Site Parking Spaces:	<u>91</u>	<u>91</u>
B. Customer Parking Spaces:	<u>50</u>	<u>50</u>
C. Employee Parking Spaces:	<u>41</u>	<u>41</u>
D. Loading Areas:	<u>2</u>	<u>2</u>

*16
CHANGE*

IV. TYPICAL OPERATION

	<u>Existing</u>	<u>Proposed</u>
A. Days of Operation:	<u>365</u>	<u>365</u>
B. Expected Hours of Operation:	<u>0700-1800</u>	<u>0700-1800</u>
C. Anticipated Number of Shifts:	<u>2</u>	<u>2</u>
D. Expected Number of Full-Time Employees/Shift:	<u>60</u>	<u>72</u>
E. Expected Number of Part-Time Employees/Shift:	<u>30</u>	<u>30</u>
F. Anticipated Number of Visitors		
• busiest day:	<u>1,000</u>	<u>1,000</u>
• average/week:	<u>2,300-2,900</u>	<u>2,900</u>
G. Anticipated Number of Deliveries/Pickups		
• busiest day:	<u>16</u>	<u>21</u>
• average/week:	<u>4</u>	<u>4</u>

V. SUPPLEMENTAL INFORMATION FOR SELECTED USES

A. Commercial Meeting Facilities
Food Serving Facilities

• restaurant/deli seating capacity:	<u>N/A</u>
• bar seating capacity:	<u>N/A</u>
• public meeting room seating capacity:	<u>N/A</u>
• assembly capacity:	<u>N/A</u>

B. Residential Care Facilities (6 or more residents)
Day Care Centers

	<u>Existing</u>	<u>Proposed</u>
• type of care:	<u>N/A</u>	<u>N/A</u>
• total number of guests/children:	<u>N/A</u>	<u>N/A</u>
• total number of bedrooms:	<u>N/A</u>	<u>N/A</u>
• distance to nearest existing/approved facility/center:	<u>N/A</u>	<u>N/A</u>

WATER SUPPLY/WASTE DISPOSAL INFORMATION SHEET

I. WATER SUPPLY	<u>Domestic</u>	<u>Emergency</u>
A. Proposed source of Water (eg., spring, well, mutual water company, city, district, etc.):	<u>Well</u>	<u>Pond</u>
B. Name of Proposed Water Supplier (if water company, city, district): annexation needed?	N/A Yes___ No___	N/A Yes___ No___
C. Current Water Use (in gallons/day): Current water source:	20,850 <u>Well</u>	500,000 <u>Pond</u>
D. Anticipated Future Water Demand (in gallons/day):	<u>37,550</u>	<u>500,000</u>
E. Water Availability (in gallons/minute):	<u>75</u>	<u>1,500</u>
F. Capacity of Water Storage System (gallons):	<u>40,000</u>	<u>500,000</u>
G. Nature of Storage Facility (eg., tank, reservoir, swimming pool, etc.):	<u>Tank</u>	<u>Pond</u>
F. Completed Phase I Analysis Sheet (Attached):		
II. LIQUID WASTE	<u>Domestic</u> (sewage)	<u>Other</u> (please specify)
A. Disposal Method (e.g., on-site septic system on-site ponds, community system, district, etc.):	<u>On-site Septic/leachfield</u>	<u>On-site pond/irrigation</u>
B. Name of Disposal Agency (if sewage district, city, community system): annexation needed?	N/A Yes___ No <u>✓</u>	N/A Yes___ No <u>✓</u>
C. Current Waste Flows (peak flow in gallons/day):	<u>2,500</u>	<u>18,350</u>
D. Anticipated Future Waste Flows (peak flows in gallons/day):	<u>4,610</u>	<u>32,940</u>
E. Future Waste Disposal Capacity (in gallons/day):	<u>4,610</u>	<u>33,000</u>
III. SOLID WASTE DISPOSAL		
A. Operational Wastes (on-site, landfill, garbage co., etc.):	<u>Garbage Co.</u>	<u>Garbage Co.</u>
B. Grading Spoils (on-site, landfill, construction, etc.):	<u>N/A</u>	<u>N/A</u>
IV. HAZARDOUS/TOXIC MATERIALS (Please fill out attached hazardous materials information sheet, attached)		
A. Disposal Method (on-site, landfill, garbage co., waste hauler, etc.):	<u>Priv. Hauler</u>	<u>Priv. Hauler</u>
B. Name of Disposal Agency (if landfill, garbage co., private hauler, etc.):	<u>Priv. Hauler</u>	<u>Priv. Hauler</u>



**Napa County Department of Environmental Management
CUPA-Related Business Activities Form**

Business Name: Mumm Napa Valley

Business Address: 8445 Silverado Trail, Rutherford, CA, 94573

Contact: Rob McNeil

Phone #: (707) 967-7701

A. HAZARDOUS MATERIALS

Have on site (for any purpose) hazardous materials at or above 55 gallons for liquids, 500 pounds for solids, or 200 cubic feet for compressed gases (include liquids in AST's and UST's or handle radiological materials in quantities for which an emergency plan is required pursuant to 10 CFR Parts 30, 40 or 70?

☒ YES ☐ NO

B. UNDERGROUND STORAGE TANKS (UST's)

1. Own or operate underground storage tanks?

☐ YES ☒ NO

2. Intend to upgrade existing or install new UST's?

☐ YES ☒ NO

C. ABOVE GROUND STORAGE TANKS (AST's)

Own or operate AST's above these thresholds:

- Any tank capacity with a capacity greater than 660 gallons, or
- The total capacity for the facility is greater than 1,320 gallons?

☒ YES ☐ NO

D. HAZARDOUS WASTE

1. Generate hazardous waste?

☒ YES ☐ NO

2. Recycle more than 220 lbs/month of excluded or exempted recyclable materials (per H&SC §25143.2)?

☐ YES ☒ NO

3. Treat hazardous waste on site?

☐ YES ☒ NO

4. Treatment subject to financial assurance requirements (for Permit by Rule and Conditional Authorization)?

☐ YES ☒ NO

5. Consolidate hazardous waste generated at a remote site?

☐ YES ☒ NO

E. OTHER

1. Does the business activity include car/fleet washing, mobile detailing, auto-body related activities?

☐ YES ☒ NO

2. Does the business handle Extremely Hazardous Substances in amounts that would qualify for the Risk Management Program? Some examples and their thresholds common to Napa County include: Ammonia – 500 lbs, Sulfur Dioxide – 500 lbs, Chlorine – 500 lbs.

☒ YES ☐ NO



SUMMIT ENGINEERING INC.

707 . 527 . 0775 Phone

707 . 527 . 0212 Fax

805 . 549 . 0775 Central Coast

463 Aviation Blvd. Ste 200 Santa Rosa, CA 95403

March 12, 2008

Napa County Department of Conservation, Development & Planning
1195 Third Street, Room 210
Napa, CA 94559

Attention: Ms. Hillary Gitelman, Director

Re: Mumm Napa Valley
8445 Silverado Trails
Rutherford, CA
Use Permit Application
APN: 030-200-30
Wastewater Management Systems Feasibility Study
Project No. 2007052

Dear Ms. Gitelman:

Mumm Napa Valley, Sparkling and Still Wine Facility is proposing to increase production capacity to 850,000 gallons per year. Mumm Napa Valley Winery is located at 8445 Silverado Trails in Rutherford, California (APN 030-200-30). The attached Wastewater Feasibility Study details the proposed wastewater management system improvements.

Currently, Mumm Napa Valley Winery is producing 500,000 gallons of wine per year. To increase capacity to 850,000 gallons of wine per year there will be necessary improvements made to their winery process wastewater (PW) and sanitary sewage (SS) systems.

Mumm Napa Valley would like to propose multiple alternatives for PW treatment. The following PW treatment improvement alternatives are presented in this Wastewater Feasibility Study:

1. Preferred Option - 700K Production: Also included is a proposed interim improvement to allow an increase in capacity to 700,000 gallons. This option includes the addition of aeration to existing ponds and installation of dissolved oxygen monitoring equipment. In addition, accumulated sludge will be removed as an ongoing maintenance activity.
2. Preferred Option - 850K Production: Membrane Bioreactor (MBR) Treatment - An MBR system consists of utilizing a bioreactor and microfiltration as one unit process for biological degradation. Treated effluent is reused for irrigation disposal.
3. Option 1 - 850K Production: Anaerobic Treatment System - An anaerobic system is very compact and low energy. Treatment occurs in a steel tank but the effluent will require further treatment prior to irrigation disposal.

The existing sanitary sewage (SS) leachfield disposal system will be expanded upon to meet the proposed flow rates. The following SS expansion options are presented in this Wastewater Feasibility Study:

treat SS. The effluent will then be disposed of via continued use of existing leachfield in conjunction with an additional subsurface drip disposal field. A pressure distribution leachfield is an alternative to the subsurface drip disposal field.

These options will be discussed in the following sections of this feasibility study. Following approval of the Use Permit, Mumm Napa Valley Winery will select the preferred option for design and installation. Installation of the preferred alternative will be permitted and inspected by the Napa County Department of Environmental Management.

- Enclosure A: Vicinity Map, Overall Site Plan, Assessor's Parcel Map, PW Flow Schematic (850K and 700K production), SS Flow Schematic, Typical Winery Wastewater Characteristics
- Enclosure B: Wastewater Management System Feasibility Study, Typical Winery Wastewater Characteristics
- Enclosure C: Design Criteria, PW Pond Water Balance
- Enclosure D: Smith and Loveless MBR Literature & MBR Sales Agreement
- Enclosure E: Napa County Site Evaluation Information

Should you have any questions or need any additional information in regard to this proposal, please don't hesitate to contact me.

Sincerely,



Nicole Corson, E.I.T.
CIVIL/WASTEWATER STAFF ENGINEER

cc: Rob McNeill – Mumm Napa Valley Winery
Kay Philippakis – Farella Braun + Martel
Steve Lederer – Napa County Department of Environmental Management

NC/jbh

SUMMIT ENGINEERING, INC.

March 10, 2008

Project No. 2007052

MUMM NAPA VALLEY WINERY

USE PERMIT MAJOR MODIFICATION

WASTEWATER MANAGEMENT SYSTEM FEASIBILITY STUDY;

ENCLOSURE A

VICINITY MAP

OVERALL SITE PLAN

ASSESSOR'S PARCEL MAP

PW FLOW SCHEMATIC – 850K PRODUCTION

PW FLOW SCHEMATIC – 700K PRODUCTION

SS FLOW SCHEMATIC

TYPICAL WINERY WASTEWATER CHARACTERISTICS

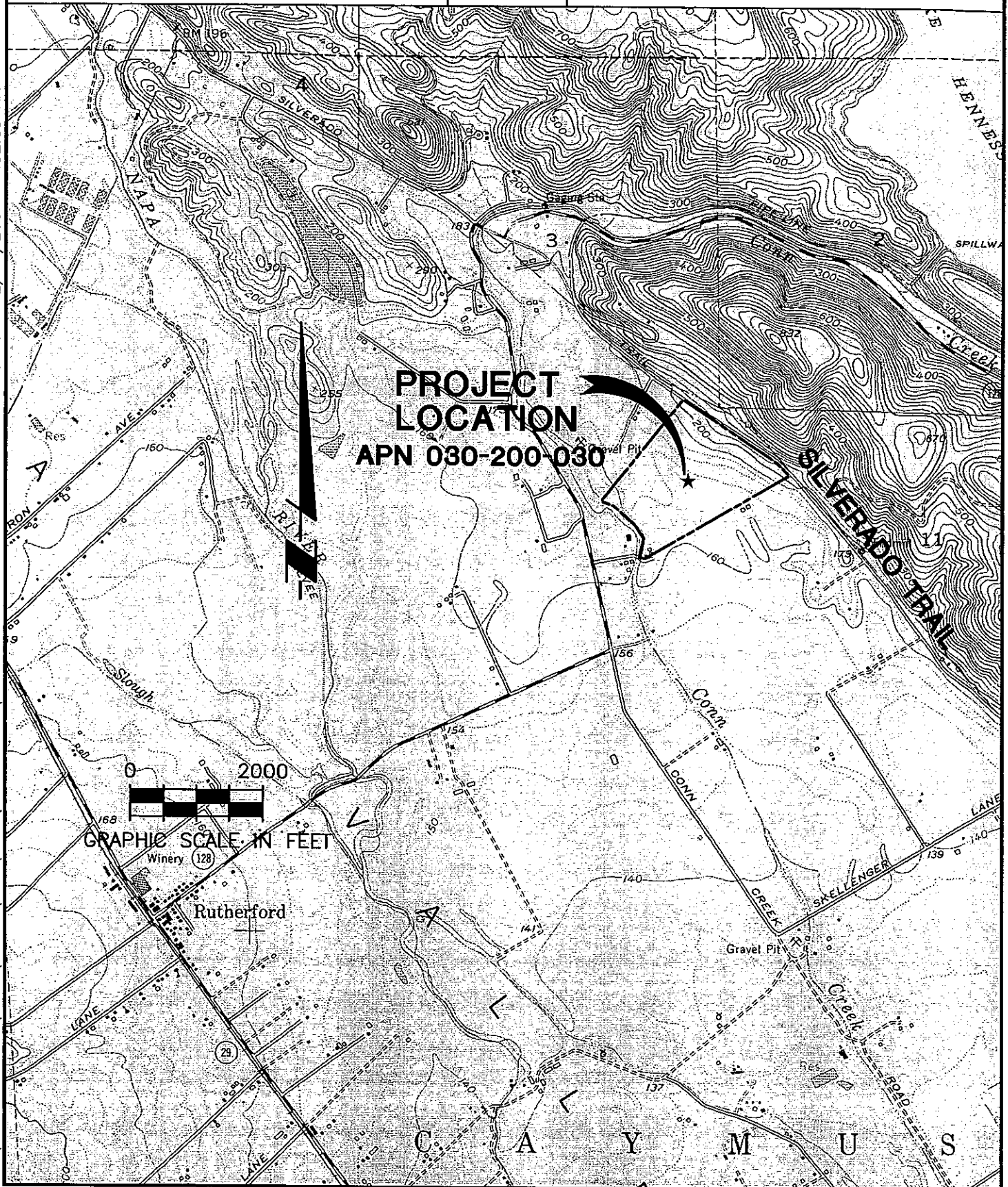
MUMM NAPA VALLEY
8455 SILVERADO TRAIL
RUTHERFORD, CALIFORNIA
APN 030-200-030



VICINITY MAP

PROJECT NO. 2007052 DATE 11-02-07
BY RC CHK DR SHT NO 1 OF 1

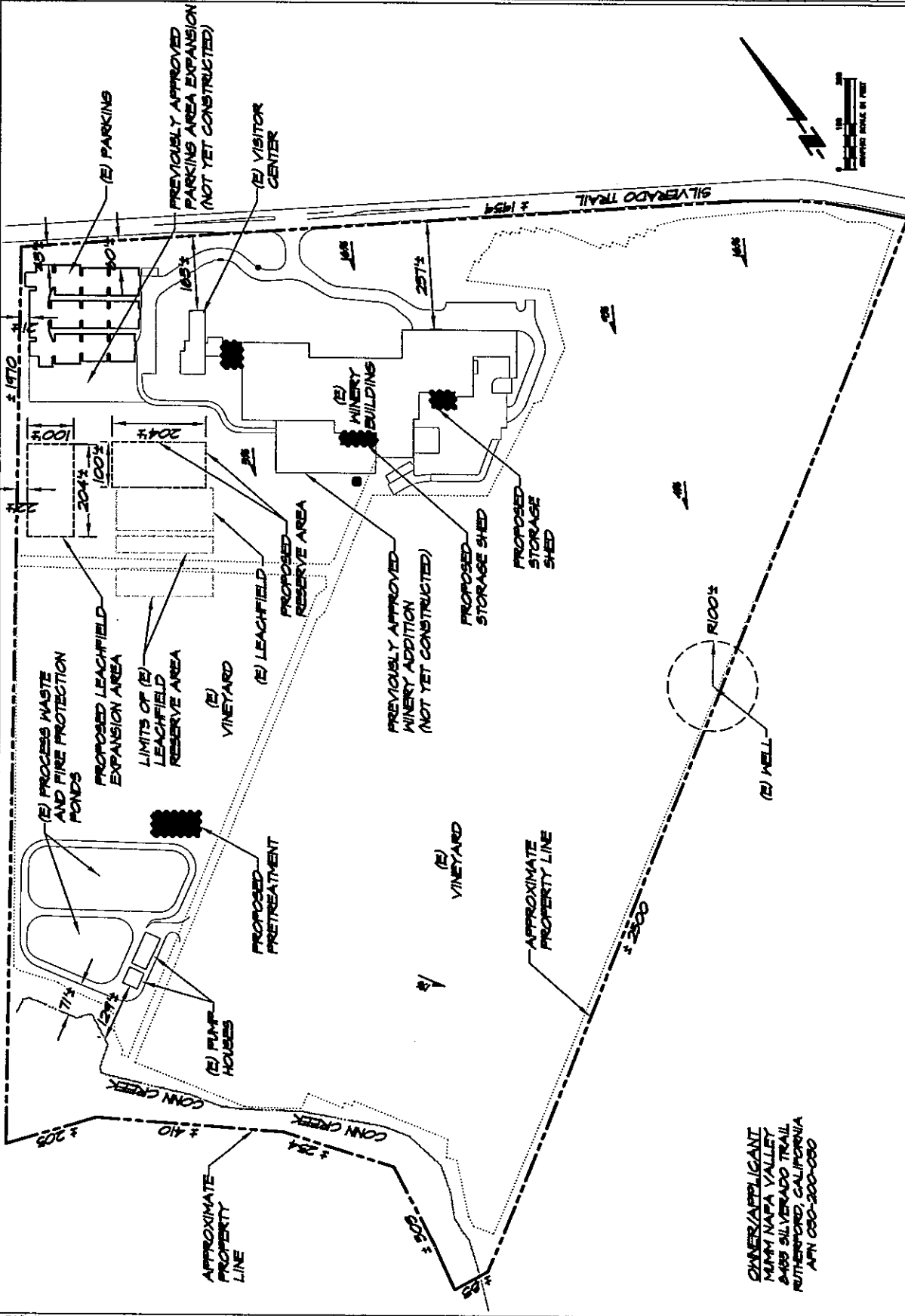
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SUMMIT ENGINEERING INC.

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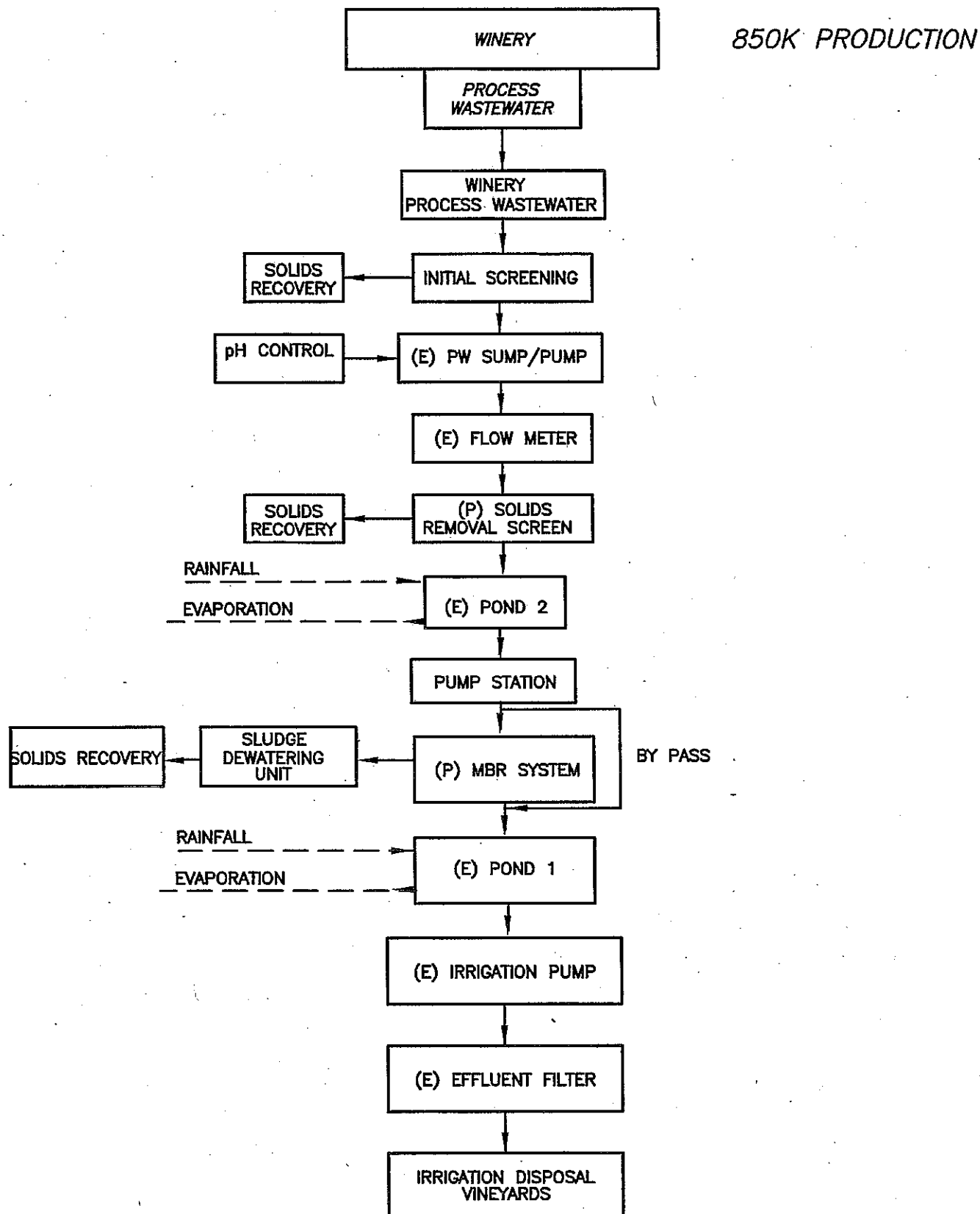
MUMM NAPA VALLEY
8445 SILVERADO TRAILS
RUTHERFORD, CALIFORNIA
APN 030-200-30



PROCESS WASTEWATER MANAGEMENT SYSTEM SCHEMATIC

PROJECT NO. 2007052 DATE 10-11-07
BY AS CHK AS SHT NO 1 OF 1

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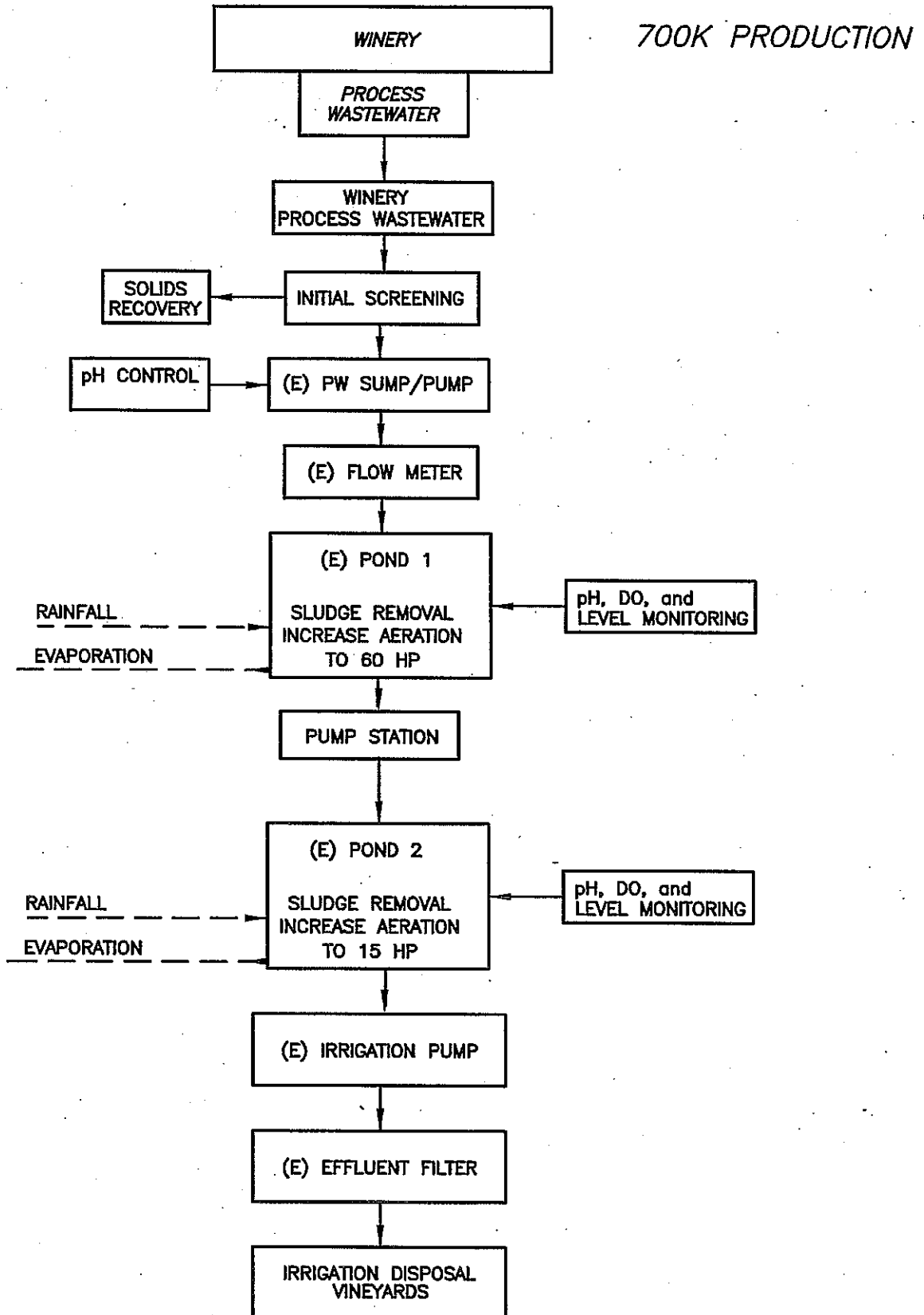


MUMM NAPA VALLEY
8445 SILVERADO TRAILS
RUTHERFORD, CALIFORNIA
APN 030-200-30



PROCESS WASTEWATER MANAGEMENT SYSTEM SCHEMATIC

PROJECT NO. 2007052 DATE 03-10-08
BY NC CHK AS SHT NO 1 OF 1



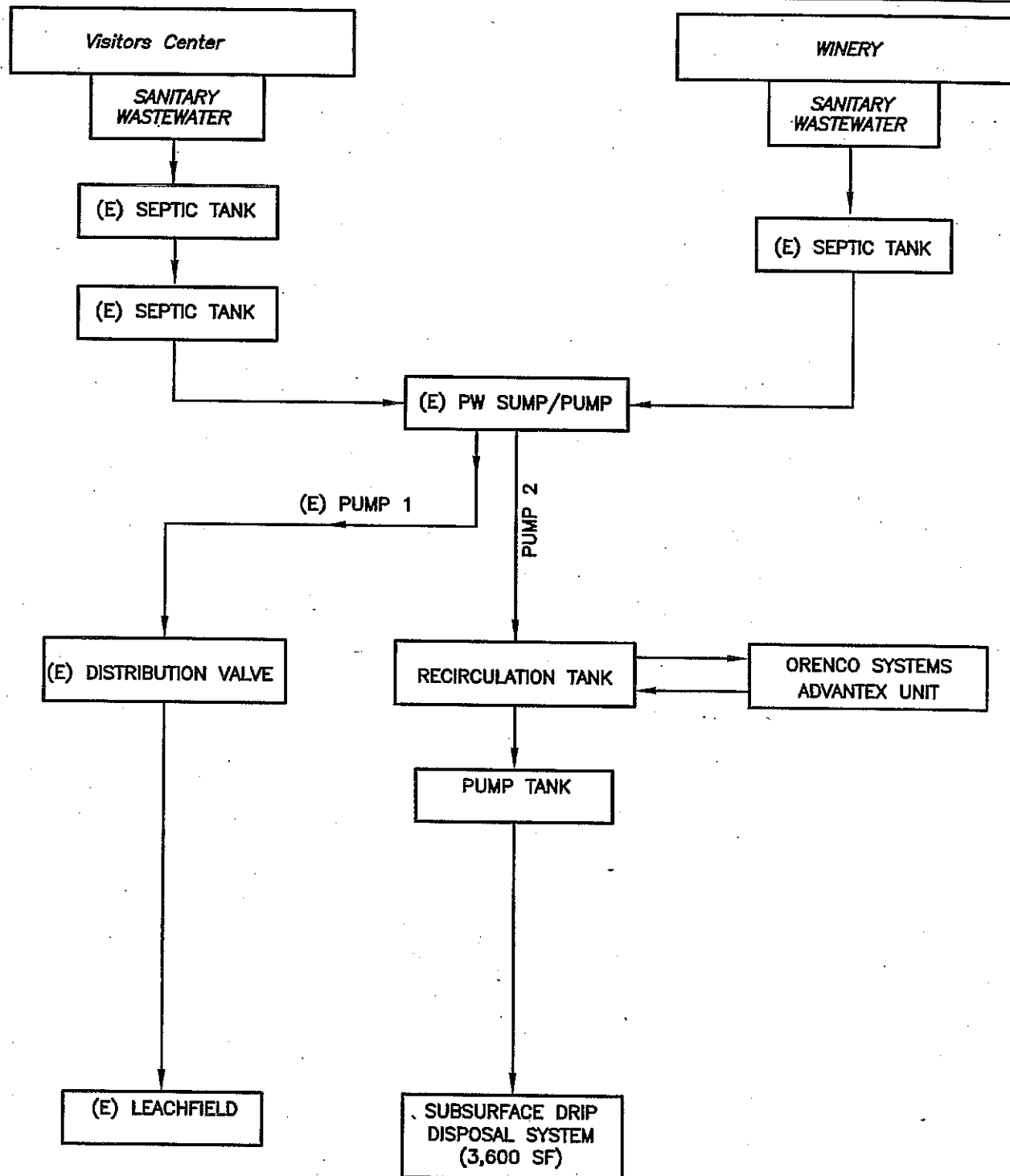
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8445 SILVERADO TRAILS
RUTHERFORD, CALIFORNIA
APN 030-200-30



SANITARY WASTEWATER MANAGEMENT SYSTEM SCHEMATIC

PROJECT NO. 2007052 DATE 1-28-08
BY KO CHK GG SHT NO 1 OF 1



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TYPICAL WINERY WASTEWATER CHARACTERISTICS

<u>Characteristic</u>	<u>Units</u>	<u>Crushing Season Range</u>	<u>Noncrushing Season Range</u>
pH	--	2.5 - 9.5	3.5 - 11.0
Dissolved Oxygen	mg/L	0.5 - 8.5	1.0 - 10.0
BOD ₅	mg/L	500 - 12,000	300 - 3,500
C.O.D.	mg/L	800 - 15,000	500 - 6,000
Grease	mg/L	5 - 30	5 - 50
Settleable Solids	mg/L	25 - 100	2 - 100
Nonfilterable Residue	mg/L	40 - 800	10 - 400
Volatile Suspended Solids	mg/L	150 - 700	80 - 350
Total Dissolved Solids	mg/L	80 - 2,900	80 - 2,900
Nitrogen	mg/L	1 - 40	1 - 40
Nitrate	mg/L	0.5 - 4.8	-
Phosphorous	mg/L	1 - 10	1 - 40
Sodium	mg/L	35 - 200	35 - 200
Alkalinity (CaCO ₃)	mg/L	40 - 730	10 - 730
Chloride	mg/L	3 - 250	3 - 250
Sulfate	mg/L	10 - 75	20 - 75

SUMMIT ENGINEERING, INC.

March 10, 2008

Project No. 2007052

MUMM NAPA VALLEY WINERY

USE PERMIT MAJOR MODIFICATION

WASTEWATER MANAGEMENT SYSTEM FEASIBILITY STUDY;

ENCLOSURE B

WASTEWATER MANAGEMENT SYSTEM DESCRIPTION

MUMM NAPA VALLEY WINERY

Napa County, California

WASTEWATER MANAGEMENT SYSTEM DESCRIPTION

PROJECT DESCRIPTION

Mumm Napa Valley, Sparkling and Still Wine Facility is proposing to increase production capacity to 850,000 gallons per year. An interim production phase, between current and ultimate production goals, of 700,000 gallons is anticipated prior to increasing to ultimate production levels of 850,000 gallons per year. As part of this increase in capacity, improvements to their winery process wastewater (PW) system will be included as a modification to the existing Use Permit (U-628687). Mumm Napa Valley Winery is located at 8445 Silverado Trail in Rutherford, California (APN 030-200-30).

SITE DESCRIPTION

This is a moderately flat parcel that consists of a winery facility, visitor center, parking, and some landscaping.

PROCESS WASTEWATER CONVEYANCE, TREATMENT AND DISPOSAL

The proposed improvement options to the Process Wastewater (PW) system are shown on the attached Overall Site Plan and System Layout (Enclosure A).

Process wastewater will consist primarily of wastewaters collected at floor drains and trenches within the winery, receiving, crush, tank, and wash down areas. The process wastewater that will be used for irrigation will be collect via a pump connected to a manifold during the final wash down of the fermentation tanks. No sanitary sewage will be discharged into the PW management system. Exterior tank and process areas not under a roof will be provided with diversion capability to provide a means of routing rainwater to the storm drainage system when those areas are not in use for process purposes. No distillation will occur at the facility; hence there will be no stillage waste.

Currently, the process wastewater is treated by two facultative aerated ponds. The size of Pond 1 and Pond 2 are 2.2 and 1.1 million gallons respectively with about 0.5 million gallons of storage reserved for fire protection in Pond #2.

For the ultimate production increase, Mumm Napa Valley desires a compact PW treatment system which will produce superior effluent quality. With these goals in mind, a Membrane Bioreactor (MBR) treatment approach is the preferred option for the Wastewater Feasibility Study (WWFS) for the Use Permit. An option is provided which includes anaerobic pre-treatment followed by polishing in Pond #2.

Also included is a proposed interim improvement to allow an increase in capacity to 700,000 gallons. This option includes the addition of aeration to existing ponds and installation of dissolved oxygen monitoring equipment. In addition, accumulated sludge will be removed as an ongoing maintenance activity.

Preferred Option-700K production: Process Wastewater Management System-Aeration Improvements

1. Initial screening – trench screens, baskets
2. Existing pump station – The pump will transfer PW to the rotary screen.
3. Flow Measurement – An in-line flow measurement device will be provided to measure the PW flows being pumped to the PW treatment system.

4. Existing Rotary Screen – The motorized rotary drum screen will remove the large solids.
5. Existing Pond #1 – Accumulated sludge will be removed from the pond (maintenance activity). The aeration horsepower will be increased to 60. The aerator layout will be modified resulting in additional mooring points. Automated pond level monitoring capability will be added. Portable DO and pH sensors will be provided. Effluent sampling points will be provided.
6. Existing Pond #2 – Accumulated sludge will be removed from the pond (maintenance activity). The aeration horsepower will be increased to 15. The aerator layout will be modified resulting in additional mooring points. Automated pond level monitoring capability will be added. Effluent sampling points will be provided.
7. Irrigation Re-use – The water from Pond #2 will be used to irrigate the vineyards. Filtration step will be added to improve the effluent quality.
8. Flow Monitoring - A remote monitoring system will record influent flows, levels in the ponds, and irrigation flows.

Preferred Option-850K production: Process Wastewater Management System Using Membrane Bioreactor

1. Initial screening – trench screens, baskets
2. Existing pump station
3. Flow measurement
4. Rotary screen
5. Existing Pond #2
6. Pump station
7. Membrane Bioreactor (MBR) System
 - A. Aeration zone
 - B. Membrane module
 - C. Clear well
 - D. Flow measurement
 - E. Sludge storage tank
8. Sludge dewatering unit
9. Existing Pond #1
10. Irrigation re-use/Fire protection water storage

A discussion of each of these features is provided below. Refer to the PW flow schematic in Enclosure A for a flow diagram of the PW management system.

1. Initial screening – Provided by screened baskets and strainers installed on the trench drains and floor drains within the winery. Screen opening sizes will be approximately 1/4 inch for exterior drains and 1/8 inch for interior drains.
2. Existing Pump Station - The pump will transfer the PW to a rotary screen.
3. Flow Measurement - An in-line flow measurement device will be provided to measure the PW flows being pumped to the PW treatment system.
4. Rotary Screen – A motorized rotary drum screen will remove the large solids from the system and, as a result, reduce the organic biological loading and the accumulation of solids in the treatment system. Solids from the screening operations will be treated as pomace (residual grape solids). Refer to the solid waste section for a description of pomace handling. Rotary screen effluent will either flow to the existing Pond #2 or directly to the MBR system.
5. Existing Pond #2- The existing 1.1 million gallon pond will be re-piped in order to allow this pond to come first in the series of treatment components. This pond will help equalize the PW flows, remove settleable solids and reduce Biochemical Oxygen Demand (BOD) loads on the subsequent treatment units and minimize the size of the MBR. A pond of this volume will provide approximately 46 days of retention time at the design average day, peak harvest month flow of 24,000 PW (Enclosure C).
6. Pump Station – Pond #2 effluent will be pumped either to the MBR system or Pond #1.
7. Membrane Bioreactor (MBR) System – An MBR system consists of utilizing a bioreactor and microfiltration as one unit process which provides superior secondary effluent quality with projected BOD5 and TSS concentrations at less than 10 mg/L.

A Smith & Loveless (S&L) TITAN system is being considered for the MBR component. It consists of an aeration zone with submerged membrane modules. A schematic diagram of the MBR system is provided (Enclosure D).

- A. The PW will be pretreated using a rotary screen and aerated Pond #2. The PW will then be pumped into the aeration zone of the MBR system.
 - B. The aeration zone is equipped with a diffused air system and submerged 0.8 micron pore size membranes. Sufficient membrane pressure is created by gravity that drives flow through the membranes. The diffusers beneath the membrane module scour the membrane and provide oxygen to maintain aerobic conditions.
 - C. Clear water is drawn through the membrane while retaining solids in the aeration zone. The clean water is discharged into a clear well. From the clear well, the clean water will flow to Pond #1.
 - D. Flow measurement – An inline flow measurement device will be provided to measure flows from each of the MBR modules to the clear wells.
 - E. The suspended solids from the aeration zone enter a sludge storage zone where sludge wasting, thickening and decanting occurs.
8. Sludge Dewatering Unit – Excess sludge from the MBR sludge storage tank will be pumped to a belt filter press (BFP) for sludge dewatering. The solids from the BFP will either be disposed of offsite or used as compost onsite.

9. Existing Pond #1- The existing 2.2 million gallon pond will now be the last pond in the series. It will provide both storage and fire protection for the facility.
10. Irrigation Re-use - the water from Pond #1 will be used to irrigate the vineyards.

Option 1-850K Production: Anaerobic Treatment followed by Aerobic Polishing in Pond 2:

Anaerobic treatment is a very compact, low energy use system occurring in a steel tank. There is no need for aeration, resulting in significant energy savings. The effluent from anaerobic will require further treatment in the Pond #2. Methane gas is a beneficial by-product which can be used as an energy source.

Components of Anaerobic Treatment include the existing PW pump station, a new rotary screen, anaerobic reactor, existing Pond #2 with aeration, existing Pond #1 for storage, followed by vineyard irrigation. A steel tank, well water fed fire protection tank will be considered.

OTHER CONSIDERATIONS

Odor Control

There should be no obnoxious odors from a properly designed and operated treatment system. See Alternative Courses of Action for operation alternatives for unforeseen conditions.

Protection

Exposed wastewater treatment facilities will be posted with appropriate warning signs.

Alternative Courses of Action

1. Although no operational difficulties are foreseen, the following additional courses of action would be available if necessary:
 - A. Ability to add carbon dioxide to lower the pH at the pretreatment site or installation of another type of pH control system
 - B. Ability to add a supplemental oxygen source to the pond for odor control (such as hydrogen peroxide)
 - C. Provision of higher aeration capacity in the pond
 - D. Increased use of irrigation/disposal area to increase discharge capacity
2. The facultative aerated pond has been designed for retention of wastewater and rainwater through the majority of the rainy season with minimal discharges to irrigation/disposal fields (based on a 10 year seasonal rainfall). Should there be a winter with more rainfall than the design condition, several operational procedures are available to compensate:
 - A. Additional water conservation at winery
 - B. Light irrigation during periods between storms -- not exceeding the assimilative capacity of the soil
 - C. Increased irrigation during the months of planned irrigation.

- D. Pumping and truck transfer of treated and diluted wastewater to a sewage treatment plant or land disposal site

SOLID WASTES

Solid wastes from the winery include primarily pomace, seeds, and stems. The estimated quantities of these wastes (at ultimate capacity) are as follows:

$$\text{Ultimate Annual Total} \quad 35\% \times 5,000 \text{ tons} \quad = \quad 1750 \text{ tons}$$

[850,000 gallons/170 gallons per ton]

Based on a unit weight of 38 pounds per cubic foot, the annual volume of solids wastes would be:

$$1750 \text{ tons} \times \frac{2000 \text{ lbs}}{1 \text{ ton}} \times \frac{1}{38 \text{ lbs/CF}} \times \frac{1 \text{ CY}}{27 \text{ CF}} = 3,411 \text{ CY}$$

$$3,411 \text{ CY} \times \frac{1 \text{ acre}}{4840 \text{ SY}} \times \frac{36 \text{ in}}{1 \text{ yd}} \div 20 \text{ acres} = 1.27 \text{ in}$$

Solid waste is hauled offsite. Solids, in the form of sludge, accumulate in the settling tanks requiring periodic removal. A pump tank is normally used for settling tank cleanout and hauling for disposal.

STORMWATER & SPILL CONTAINMENT

An appropriately sized concrete containment wall will be provided around the perimeter of the MBR treatment area. Any spills will be contained within the treatment area. Stormwater will be contained and recycled through the treatment system.

SANITARY SEWAGE

The owner intends to increase their wine production to 850,000 gallons per year as well as employee numbers. Sanitary sewage (SS) flows are handled separately from process wastewater flows. In conjunction with their existing SS leachfield system, the new SS system will be designed to accommodate the additional employees and associated SS flows from the existing visitor center's guests and small events.

The preferred option for sanitary sewage treatment will use the existing disposal system in conjunction with an additional subsurface drip disposal system. An AdvanTex Pretreatment unit will be installed prior to the additional disposal system expansion. A secondary option would also include use of the existing disposal system, with additional flows treated by an additional pressure distribution (PD) system leachfield. For this option, an AdvanTex Pretreatment unit would be installed prior to the additional leachfield expansion, allowing for 12" of soil credit.

The general SS treatment and disposal system includes the following components:

1. Existing Gravity Collection
2. Existing Septic Tanks with Effluent Filter
3. Existing Pump Sump
4. Existing Pressure Distribution Leachfield Disposal

5. AdvanTex pretreatment followed by subsurface drip disposal field or PD leachfield

A discussion of the existing and proposed wastewater treatment system features is provided below. Refer to the SS flow schematic in Enclosure A for a flow diagram of the SS management system.

- A. Existing Gravity Collection – Designed to provide low maintenance and no infiltration or exfiltration. Existing piping is assumed to be compatible with sanitary sewage and satisfies Uniform Plumbing Code and local requirements.
 - B. Existing Septic Tanks with Effluent Filters – All septic tanks are precast concrete. There is one 2,500 gallon tank provided for the winery and two 1,500 gallon tanks provided for the visitor's center. Removal of solids in the septic tanks will help to reduce BOD loads on the system. Effluent filters will be provided in each tank to remove additional suspended solids which do not settle out in the tank.
 - C. Existing Pump Sump – The 1,500 gallon SS sump pump transfers treated effluent from the septic tanks to the leachfield. An additional pump will be provided to pump SS to the proposed SS system expansion. The sump pumps will be controlled with a duplex pump control panel and float switches.
 - D. Existing Leachfield – The existing leachfield is designed for a capacity of 2,500 gpd. There are three subfields and each leachline is 100 L.F giving each subfield a total of 600 L.F. The leachlines are separated by 12 feet on center and are between the vine rows.
 - E. Proposed SS System Expansion – The increase in employees, visitors and event guests results in an SS design flow of 4,610 gpd. To accommodate the additional SS flow, based on the soil evaluations, the following treatment system expansion is proposed.
 - 1) AdvanTex Textile Filter Treatment System – Orenco System's AdvanTex Treatment System is a packed bed filter that supports attached growth biological treatment. In addition to the packed bed filter, the treatment system will include a recirculation/blending tank, pumps, filtered pump vault, and valves. Controls will consist of a timer with float switch override, high water alarms, and a duplex pump control panel equipped with remote telemetry and a web based monitoring system. Treated effluent from the AdvanTex filter system will be piped to the leachfield.
 - 2) Effluent Pump Tank -- Effluent from the AdvanTex Treatment System will flow by gravity to an Effluent Pump Tank where it will be pumped to the leachfield. The PW Effluent Pump Tank will be float switch controlled.
 - 3) Subsurface Drip Disposal field – A new subsurface drip disposal field will be located at the northwest end of the property (See Overall Site Plan in Enclosure A). The soils found onsite have an acceptable depth of soil to 50 inches.
- Or
- 4) Pressure Distribution Leachfield – An additional leachfield would be located at the northwest end of the property (See Overall Site Plan in Enclosure A). The soils found onsite have acceptable depth of soil to 50 inches.

SUMMIT ENGINEERING, INC.

March 10, 2008

Project No. 2007052

MUMM NAPA VALLEY WINERY
USE PERMIT MAJOR MODIFICATION
WASTEWATER MANAGEMENT SYSTEM FEASIBILITY STUDY;
ENCLOSURE C
PW DESIGN CRITERIA
SS DESIGN CRITERIA

MUMM NAPA VALLEY WINERY

Napa County, California

PW DESIGN CRITERIA

Average Flow (700K Production)

Assuming 4,118 tons of grapes (700,000 gallons of wine) are crushed during the 2008 harvest year. It takes 1 ton of grapes to make 170 gallons of wine.

Total flow

$$= 4,118 \text{ tons of grapes/year} \times 170 \text{ gal wine/ton of grapes} \times 7.7 \text{ gal PW/gal wine}$$

$$= 5,390,462 \text{ gallons per year}$$

$$\text{Average flow} = 5,390,462/365 = 14,768 \text{ gallons per day}$$

Peak Month flow

Peak month of September accounts for 15.1 percent of the total flow

Peak month flow

$$= 5,390,462 \times .151/30$$

$$= 27,132 \text{ gallons per day}$$

Use 28,000 gpd

Average Harvest flow

Harvest accounts for 35.3 percent of the total flow

Peak month flow

$$= 5,390,462 \times .353/92$$

$$= 20,683 \text{ gallons per day}$$

Design Flow

The peak month flow of **28,000 gpd** is assumed as the design flow. For the interim increase in production, the existing Pond 1 (2.2 million gallons) will continue to serve as the primary mode of treatment. Pond 1 will be used as an equalization pond and also for partial treatment of the wastewater. At about 3.3 million gallon storage volume, the Pond 2 and Pond 1 will provide approximately 120 days of retention.

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Average Flow (850K Production)

Assuming 5,000 tons of grapes (850,000 gallons of wine) are crushed during the year. It takes 1 ton of grapes to make 170 gallons of wine.

Total flow

$$= 5,000 \text{ tons of grapes/year} \times 170 \text{ gal wine/ton of grapes} \times 7.7 \text{ gal PW/gal wine}$$

$$= 6,545,000 \text{ gallons per year}$$

$$\text{Average flow} = 6,545,000/365 = 17,930 \text{ gallons per day}$$

Peak Month flow

Peak month of September accounts for 15.1 percent of the total flow

Peak month flow

$$= 6,545,000 \times .151/30$$

$$= 32,940 \text{ gallons per day}$$

Use 33,000 gpd

Average Harvest flow

Harvest accounts for 35.3 percent of the total flow

Peak month flow

$$= 6,545,000 \times .353/92$$

$$= 25,110 \text{ gallons per day}$$

Design Flow

The peak month flow of **33,000 gpd** is assumed as the design flow. For the preferred treatment mode using Membrane Bioreactor (MBR), the existing Pond 2 will be first pond in series, followed by the MBR system, followed by the existing Pond 1. Pond 2 will be used as an equalization pond and also for partial treatment of the wastewater. At about 3.3 million gallon storage volume, the Pond 2 and Pond 1 will provide approximately 100 days of retention.

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SS DESIGN CRITERIA

Sanitary sewage (SS) at Mumm Napa Valley Winery will consist of typical wastewater generated from restrooms for employees and visitors.

Background and Assumptions

The existing leachfield at Mumm Napa Valley has been sized to accommodate disposal of sanitary sewage (SS) for approximately 2,500 gpd. Anticipated sanitary sewage flows are projected as follows:

The following employee and visitation scenarios are proposed following the production increase and expansion.

Harvest – Weekday

72 full-time employees x 15 gal/employee/day	=	1080 gpd
30 seasonal employees x 15 gal/employee/day	=	450 gpd
3 cellar staff x 15 gal/employee/day	=	45 gpd
285 tasting visitors (average) x 3 gal/visitor	=	855 gpd
25 business visitors x 3 gal/visitor/day	=	75 gpd
Total (No events)		2,505 gpd
65 event visitors x 5 gal/visitor (includes meal)	=	325 gpd
Total (w/ event)		2,830 gpd

Harvest – Weekend

57 full-time employees x 15 gal/employee/day	=	855 gpd
30 seasonal employees x 15 gal/employee/day	=	450 gpd
3 cellar staff x 15 gal/employee/day	=	45 gpd
1,000 tasting visitors (peak) x 3 gal/visitor	=	3,000 gpd
Total (No events)		4,350 gpd

Non-Harvest - Weekday

72 full-time employees x 15 gal/employee/day	=	1080 gpd
12 seasonal employees x 15 gal/employee/day	=	180 gpd
285 tasting visitors (average) x 3 gal/visitor	=	855 gpd
25 business visitors x 3 gal/visitor/day	=	75 gpd
Total (No events)	=	2,190 gpd
(6 times/year w/ catered meal) 100 visitors x 5 gal/visitor	=	500 gpd
Total (w/ event)		2,690 gpd

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Page C.4

Non-Harvest - Weekend

57 full-time employees x 15 gal/employee/day	=	=855 gpd
12 part-time employees x 15 gal/employee/day	=	=180 gpd
1,000 tasting visitors (peak) x 3 gal/visitor	=	=3,000 gpd
25 business visitors x 3 gal/visitor/day	=	=75 gpd
Total (No events)	=	4,110 gpd
(6 times/year w/ catered meal) 100 visitors x 5 gal/visitor	=	=500 gpd
Total (w/ event)		4,610 gpd

Events

In the above flow estimations, it is assumed that the largest event which will occur without the use of portable restrooms is a 100 person event with a catered meal. It is also assumed that a large event will also not be scheduled to occur simultaneously with a peak harvest weekend.

(6 times/year w/ catered meal) 100 visitors x 5 gal/visitor	=	500 gpd
(1 time/year w/ catered meal) 800 visitors x 5 gal/visitor	=	4,000 gpd
(12 times/year w/ catered meal) 65 visitors x 5 gal/visitor	=	325 gpd
(1 time/year w/ catered meal) 400 visitors x 5 gal/visitor	=	2,000 gpd

Therefore, a total design flow of **4,610 gpd** will be utilized.

Sanitary Sewage Septic Tanks

The required septic tank size for the winery SS flow is based on the Uniform Plumbing Code Sizing Requirements and is calculated as follows:

$$\begin{aligned} V &= 1,125 + 0.75*Q \\ &= 1,125 + (0.75) * 4,610 \text{ gpd} \\ &= 4,583 \text{ gallons} \end{aligned}$$

There are two 1,500 gallon septic tanks located at the visitors and center and one 2,500 gallon septic tank at the winery for a total septic tank volume of 5,500 gallons. These septic tanks will adequately handle the SS flow. Effluent filters will be located at the outlet of each septic tank to reduce solids passage to the SS treatment system.

AdvanTex Textile Filter Treatment System

Orenco System's AdvanTex Treatment System is a packed bed textile filter that supports attached growth biological treatment. In addition to the packed bed filter, as mentioned above, the treatment system will include septic tanks, a recirculating tank, pumps, and valves. Controls will consist of a timer with float switch override, high water alarms, and a duplex pump control panel equipped with remote telemetry and a web based monitoring system

Pre-perc, Groundwater, and Percolation Testing Results

The projected additional leachfield sizing for this feasibility study is based on a pre-perc site performed on October 26, 2006 by Joy Hornisher Napa County Department of Environmental Management Registered Environmental Health Specialist (REHS) and Summit Engineering (Enclosure E). One area was investigated and identified as being suitable for a Pressure Distribution (PD) leachfield system with either pretreatment or additional imported fill. The proposed additional leachfield will consist of either being pretreated via an AdvanTex Textile Filter unit or by importing 12-inches of fill material with total trench depth of 26-inches (with a total of 10-inches of gravel below the pipe).

Area 1 is located to the northwest of the proposed winery. Seven acceptable test pits were excavated in this area with acceptable soil depths ranging from 50 to 70 inches. These soil test pits exhibited a clay loam to a depth of 50" or greater. There was an eighth test perform with suitable soils up to a depth of 48 inches which was not used in our design calculations because this test pit was the furthest north and there was enough space in the more desirable soil area. According to Napa County Design Guidelines under Table 2 in Appendix 1, this soil type has a corresponding hydraulic loading rate of 0.6 gals/sf/day (or 167 sf per 100 gallons/day). Site Evaluation and test pit location map are provided in Enclosure E.

Leachfield

The Existing leachfield is designed for 2,500 gpd. The peak SS generation following the expansion is projected to generate approximately 4,610 gpd SS. The design flow for the expansion of the leachfield is estimated as follows:

$$\begin{array}{rcl} \text{Total Flow - Existing Leachfield Capacity} & = & \text{Expansion Design Flow} \\ 4,610 \text{ gpd} - 2,500 \text{ gpd} & = & 2,110 \text{ gpd} \end{array}$$

Subsurface Drip Disposal System

Subsurface drip system disposal field sizing is based on the drip tubing manufacture's recommendation as well as Table 10 of Napa County ASTS guidelines. The onsite soil is identified in Table 10 of the ASTS Guidelines as a class III soil type (clay loam), which corresponds to an estimated percolation rate of 30 to 45 MPI, and is used to size the system. Approximately 100 square feet of drip field is required for every 167 gpd of effluent discharged. The size for disposal field required is calculated as follows:

$$2,110 \text{ gpd} \times 167 \text{ sf}/100 \text{ gpd} = 3,524 \text{ sf}$$

SUMMIT ENGINEERING, INC.

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A disposal field of approximately 3,600 square feet will be provided for disposal of 2,110 gpd effluent. The drip tubing will be installed in 18 inch deep trenches with 18 inches of native backfill.

A 3600 sf subsurface drip disposal system should be adequate to handle the additional wastewater flow of 2,110 gpd. Per Napa County requirements, a suitable expansion area of 200% must also be identified. Please refer to the Overall Site Plan in Enclosure A for the locations of primary and reserve areas. The subsurface drip disposal trenches must follow contour of the natural grade.

Pressure Distribution Leachfield Option:

With an hydraulic application rate of 0.6 gal/sf/day, the additional leachfield area required for disposal of the projected wastewater flows in a pressure distribution leachfield system is calculated as follows:

$$\begin{aligned}\text{Leachline required} &= \frac{(2,110 \text{ gpd})}{(1.67 \text{ sf/lf}) (0.6 \text{ gal/sf/day})} \\ &= 1,758 \text{ lf} \\ \text{Leachline proposed} &= \underline{1,800 \text{ lf}}\end{aligned}$$

A Pressure Distribution (PD) Leachfield system with 1,800 lf of leach line (18- 100 lf leachlines) should be adequate to handle the additional wastewater flow of 2,110 gpd. Per Napa County requirements, a suitable expansion area of 100% must also be identified. Please refer to the Overall Site Plan in Enclosure A for the locations of primary and reserve areas. The PD leachfield trenches will be excavated to a depth of 26 inches with the first 14 inches filled with pea gravel following the placement of 12 inches of backfill. The trenches are to be spaced 12-feet apart horizontally on center and must follow contour of the natural grade. (The leachlines will be constructed between vine rows).

The proposed 1,800 lf for the leachfield will require an area of approximately 20,400 sf or a 100' by 204' area. The 100% reserve area will require an area of approximately 204,000 sf (See Overall Site Plan in Enclosure A).

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MUMM NAPA VALLEY WINERY

USE PERMIT MAJOR MODIFICATION

WASTEWATER MANAGEMENT SYSTEM FEASIBILITY STUDY:

ENCLOSURE D

SMITH AND LOVELESS MBR LITERATURE



CRANE TRANSPORTATION GROUP

TRAFFIC AND TRANSPORTATION PLANNING AND ENGINEERING

November 28, 2007

Ms. Demae Rubins, AICP
Summit Engineering
463 Aviation Boulevard, #200
Santa Rosa, CA 94503
707-527-0775 x166
fax (916) 379-6219

**Re: Determination of Existing and Post-Expansion AM and PM Peak Hour Trip
Generation for the Proposed Mumm Winery Production Expansion**

Dear Ms. Rubins:

At your request, Crane Transportation Group (CTG) has conducted a study to determine the existing, and post-winery production expansion, AM and PM peak hour trip generation at Mumm Winery in Napa County, California. Work tasks have included weekday AM and PM peak period traffic counts at the Mumm Winery driveway on Silverado Trail to determine the ambient traffic weekday AM and PM peak hours and Saturday peak hour. Then, Mumm staff have assisted CTG in determining existing activity during the Silverado Trail ambient peak hours, as well as increases in activity due to the proposed expansion of winery production. All data has been presented on trip generation tables by time of day, according to the seasons of winery activity, including all seasons of the year.

I. PROPOSED PROJECT

Mumm Napa Valley has produced world class sparkling wine in the *methode Champenoise* at the project site since obtaining a use permit in 1987 for grape receiving, production, aging, bottling, selling and shipping of 500,000 gallons of sparkling wine annually as well as for public tasting and tours. Mumm Napa Valley would like the ability to increase production to 850,000 gallons per year and to add 2,250 feet to a public viewing deck. The proposed production expansion will require upgrading the existing process wastewater treatment facility, expanding the sanitary sewage leach field, as well as the addition of two new storage sheds totaling 3,710 square feet, an expansion that leaves the total floor area of the facility within the previously permitted square footage. For traffic analysis purposes, the potential for traffic increases pertains to increases in employees and truck shipping and deliveries at the Mumm Winery.

II. RESULTS OF TRIP GENERATION FOR EXISTING AND FUTURE (POST-EXPANSION) WEEKDAY AM and PM AND SATURDAY PEAK HOUR TRAFFIC

Weekday AM and PM peak period (7:00 – 9:00 and 4:00-6:00) traffic counts were conducted by Crane Transportation Group on Friday, October 19 and Saturday, October 20, 2007 at the Mumm Winery driveway intersection with Silverado Trail. The peak traffic hour of the highway was 7:45 – 8:45 AM and 4:00 to 5:00 PM on the Friday count day, and from 3:00 – 4:00 PM on the Saturday count day.

CTG interviewed Mumm staff¹ to determine the major seasons characterizing all activities at the winery. There are three periods distinguished by varying levels of staff trips and truck trips to and from the winery: August through September Harvest, March through July Tirage (bottling), and October through February (non-Harvest, non-Tirage). Tables 1 through 6 detail existing and proposed activity levels.

¹ Rob McNeill, management, Lorenzo Vega, Anthony Bazzano and Tamra Lotz, operations, winemaking and production, and Keith Collard, finance.

III. PROPOSED WINERY WEEKDAY AM and PM PEAK HOUR and SATURDAY NET NEW PEAK HOUR TRIPS

Based upon the findings provided in Tables 1 through 6, the 350,000 gallon production increase would result in, during any one-hour peak period: 1 inbound employee trip and 5 two-way truck trips on a weekday morning, 2 outbound employee trips and no increased truck trips on a weekday afternoon, and 1 outbound employee trip (no increased truck trips) on a Saturday afternoon.

We thank you for the opportunity to conduct this study and stand ready to assist in responding to any questions from County staff regarding our survey findings.

Sincerely,

A handwritten signature in cursive script that reads "Mark D. Crane".

Mark D. Crane, P.E.
Principal

Table 1

WINERY OPERATIONS—EMPLOYEES
WEEKDAY AM PEAK HOUR TRIP GENERATION (7:45-8:45)

DESCRIPTION	October - February NON HARVEST/ NON BOTTLING				August - September HARVEST				March - July (Tirage) BOTTLING			
	EXISTING		POST-PROJECT		EXISTING		POST-PROJECT		EXISTING		POST-PROJECT	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Winery Production	4		5		4		5		4		5	
Cellar/Storage ¹												
Administration	10		10		10		10		10		10	
Sales ²												
Bottling ³	17		17						24		24	
Winery Grounds Maintenance ⁴												
TOTAL	31		32		14		15		38		39	

Source: Mumm Winery

Compiled by: Crane Transportation Group

¹ Cellar/storage employees arrive at 6 AM and the majority depart before 4:00 PM.

² All sales occur off-site.

³ Bottling employees arrive as early as 6 AM and the majority depart before 4:00 PM.

⁴ Maintenance workers arrive at 6 AM and the majority depart by 3:30 PM.

Table 2

WINERY OPERATIONS—TRUCKS (TRUCK LOADS) *
WEEKDAY AM PEAK HOUR TRIP GENERATION (7:45-8:45)

DESCRIPTION	October - February NON HARVEST/ NON BOTTLING				August - September HARVEST				March - July (Tirage) BOTTLING			
	EXISTING		POST-PROJECT		EXISTING		POST-PROJECT		EXISTING		POST-PROJECT	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Grape Importation					6	4	10	7				
Tanker Trucks (Bulk Liquids)					1	1	1	1				
Pomace Disposal					1	1	1	1				
Bottle Delivery and Finished Transport to Storage	1	1	1	1	1	1	1	1	1	1	1	1
Corks/Labels, etc.									2	2	2	2
UPS/FedEx/Garbage/Mail Other (detail)	1	1	1	1	1	1	1	1	1	1	1	1
TOTAL	2	2	2	2	10	8	14	11	4	4	4	4

* Truck "round trips": are shown as an inbound trip in the left column and an outbound trip in the adjacent (right) column for Existing and Post Project conditions during Non-Harvest, Harvest and Bottling time periods.

Source: Mumm Winery

Compiled by: Crane Transportation Group

Table 3

**WINERY OPERATIONS—EMPLOYEES
WEEKDAY PM PEAK HOUR TRIP GENERATION (4:00-5:00)**

DESCRIPTION	October - February NON HARVEST/ NON BOTTLING				August - September HARVEST				March - July (Tirage) BOTTLING			
	EXISTING		POST-PROJECT		EXISTING		POST-PROJECT		EXISTING		POST-PROJECT	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Winery Production		4		5		6		7		4		5
Cellar/Storage ⁵												
Administration		10		10		10		10		10		10
Sales ⁶												
Bottling ⁷		4		4		4		4		4		4
Winery Grounds Maintenance ⁸		1		2		1		2		1		2
TOTAL		19		21		21		23		19		21

Source: Mumm Winery

Compiled by: Crane Transportation Group

⁵ Cellar/storage employees arrive at 6 AM and the majority depart before 4:00 PM.⁶ All sales occur off-site.⁷ Most bottling employees before 4:00 PM.⁸ Most maintenance depart by 3:30 PM

Table 4

WINERY OPERATIONS—TRUCKS (TRUCK LOADS) *
WEEKDAY PM PEAK HOUR TRIP GENERATION (4:00-5:00)

DESCRIPTION	October - February NON HARVEST/ NON BOTTLING				August - September HARVEST				March - July (Tirage) BOTTLING			
	EXISTING		POST-PROJECT		EXISTING		POST-PROJECT		EXISTING		POST-PROJECT	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Grape Importation					2	2	3	3				
Tanker Trucks (Bulk Liquids)												
Pomace Disposal					1	1	1	1				
Bottle Delivery and Finished Transport to Storage												
Corks/Labels, etc.												
UPS/FedEx/Garbage/Mail Other (detail)	1	1	1	1	1	1	1	1	1	1	1	1
TOTAL	1	1	1	1	4	4	5	5	1	1	1	1

* Truck "round trips": are shown as an inbound trip in the left column and an outbound trip in the adjacent (right) column for Existing and Post Project conditions during Non-Harvest, Harvest and Bottling time periods.

Source: Mumm Winery
 Compiled by: Crane Transportation Group

Table 5

WINERY OPERATIONS—EMPLOYEES
SATURDAY PM PEAK HOUR TRIP GENERATION (3:00-4:00)

DESCRIPTION	October - February NON HARVEST/ NON BOTTLING				August - September HARVEST				March - July (Tirage) BOTTLING			
	EXISTING		POST-PROJECT		EXISTING		POST-PROJECT		EXISTING		POST-PROJECT	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Winery Production						2		3		1		1
Cellar/Storage					2	3		3		1		1
Administration												
Sales												
Bottling												
Winery Grounds Maintenance		2		2		2		2		2		2
TOTAL		2		2	2	7	2	8		4		4

Source: Mumm Winery
Compiled by: Crane Transportation Group

Table 6

WINERY OPERATIONS—TRUCKS (TRUCK LOADS) *
SATURDAY PM PEAK HOUR TRIP GENERATION (3:00-4:00)

DESCRIPTION	October - February NON HARVEST/ NON BOTTLING				August - September HARVEST				March - July (Tirage) BOTTLING			
	EXISTING		POST-PROJECT		EXISTING		POST-PROJECT		EXISTING		POST-PROJECT	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Grape Importation					3	2	4	3				
Tanker Trucks (Bulk Liquids)						1		1				
Pomace Disposal					1	1	1	1				
Bottle Delivery and Finished Transport to Storage												
Corks/Labels, etc.												
UPS/FedEx/Garbage/Mail Other (detail)												
TOTAL					4	4	5	5				

* Truck "round trips": are shown as an inbound trip in the left column and an outbound trip in the adjacent (right) column for the Saturday Harvest time period.

Source: Mumm Winery

Compiled by: Crane Transportation Group

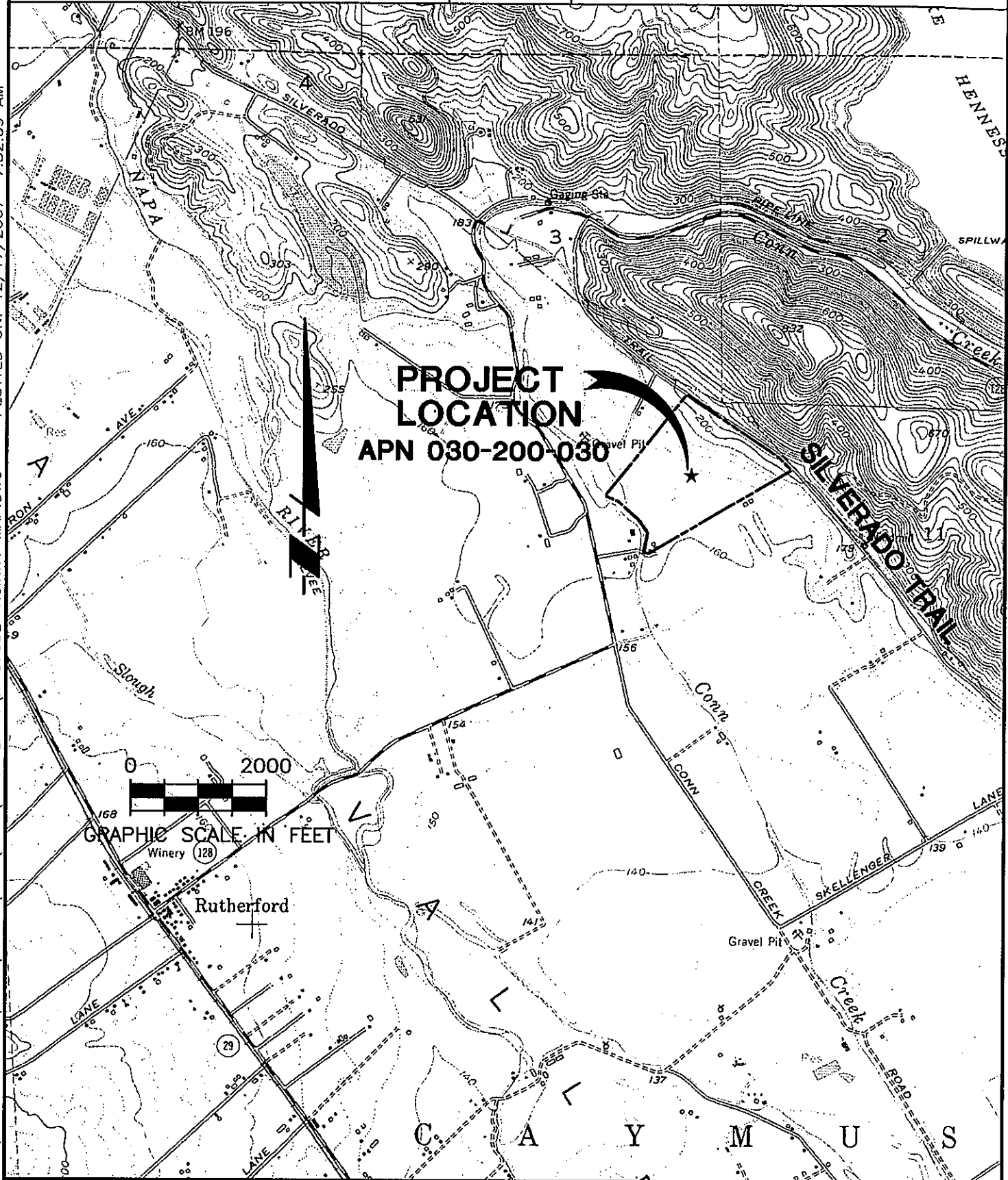
**MUMM NAPA VALLEY
8455 SILVERADO TRAIL
RUTHERFORD, CALIFORNIA
APN 030-200-030**



VICINITY MAP

PROJECT NO. 2007052 DATE 11-02-07
BY RC CHK DR SHT NO 1 OF 1

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SUMMIT ENGINEERING INC.

463 AVIATION BLVD. #200
SANTA ROSA, CA 95403

707.527.0775
FAX 707.527.0212

INITIAL STATEMENT OF GRAPE SOURCE
(Napa County Zoning Ordinance Sections 12419(b) and (c))

I hereby certify that the current application for establishment or expansion of a winery pursuant to the Napa County Winery Definition Ordinance will employ sources of grapes in accordance with the requirements of Section 12419(b) and/or (c) of that Ordinance.

James R. McNeill
Signature

Dec. 17, 2007
Date

Letters of commitment from grape suppliers and supporting documents will be required prior to issuance of any building permits for the project. Recertification of compliance will be required on a periodic basis. Recertification after initiation of the requested wine production may require the submittal of additional information regarding individual grape sources. Proprietary information will not be disclosed to the public.

INDEMNIFICATION AGREEMENT

Pursuant to Chapter 1.30 of the Napa County Code, as part of the application for a discretionary land use project approval for the project identified below, Applicant agrees to defend, indemnify, release and hold harmless Napa County, its agents, officers, attorneys, employees, departments, boards and commissions (hereafter collectively "County") from any claim, action or proceeding (hereafter collectively "proceeding") brought against County, the purpose of which is to attack, set aside, void or annul the discretionary project approval of the County, or an action relating to this project required by any such proceeding to be taken to comply with the California Environmental Quality Act by County, or both. This indemnification shall include, but not be limited to damages awarded against the County, if any, and cost of suit, attorneys' fees, and other liabilities and expenses incurred in connection with such proceeding that relate to this discretionary approval or an action related to this project taken to comply with CEQA whether incurred by the Applicant, the County, and/or the parties initiating or bringing such proceeding. Applicant further agrees to indemnify the County for all of County's costs, attorneys' fees, and damages, which the County incurs in enforcing this indemnification agreement.

Applicant further agrees, as a condition of project approval, to defend, indemnify and hold harmless the County for all costs incurred in additional investigation of or study of, or for supplementing, redrafting, revising, or amending any document (such as an EIR, negative declaration, specific plan, or general plan amendment) if made necessary by said proceeding and if the Applicant desires to pursue securing approvals which are conditioned on the approval of such documents.

In the event any such proceeding is brought, County shall promptly notify the Applicant of the proceeding, and County shall cooperate fully in the defense. If County fails to promptly notify the Applicant of the proceeding, or if County fails to cooperate fully in the defense, the Applicant shall not thereafter be responsible to defend, indemnify, or hold harmless the County. The County shall retain the right to participate in the defense of the proceeding if it bears its own attorneys' fees and costs, and defends the action in good faith. The Applicant shall not be required to pay or perform any settlement unless the settlement is approved by the Applicant.

Mmm Napa Estates LLC
Applicant

12-17-07
Date

James R. McNeill V.P. Winemaking/Operations
Property Owner (if other than Applicant)

Mmm Napa
Project Identification