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July 2, 2008  
Project 91823

Mr. Dave Hardy  
County of Sonoma  
Permit & Resource Management Department  
Project Review Division  
2550 Ventura Avenue  
Santa Rosa, California 95403-2829

**SUBJECT: Review of Preliminary Geologic Study Report  
RGH Consultants, Inc. (Updated April 22, 2008)  
Cornell Winery  
245 Wappo Road  
Sonoma County, California**

Dear Mr. Hardy:

As requested, Kleinfelder is pleased to present our peer review of the Preliminary Geologic Study Report for the Cornell Winery property located at 245 Wappo Road, in Sonoma County, California. It is our understanding that the geologic study performed by RGH Consultants, Inc. was designed to evaluate the geologic hazards at the winery site and to comment on the geotechnical feasibility of the project and not to provide design level geotechnical recommendations, which will be submitted at a later date within a detailed geotechnical study if the project moves forward.

#### SCOPE OF WORK

Our scope of work initially consisted of reviewing available published geologic literature; review of aerial photographs of the site vicinity, review of the RGH Preliminary Geologic Study dated May 31, 2006, and a geologic reconnaissance of the site. In addition, we viewed core samples at the office of RGH from this previous study. In their May 31, 2006 report, RGH indicates that they did not observe evidence indicative of landsliding on the winery site. During our reconnaissance, we observed obvious geomorphic features which we interpreted

to be indicative of active and dormant landsliding on the winery site. As such, we met with representatives of RGH to discuss our findings and to suggest that additional geologic/subsurface exploration be performed and that that data should be incorporated into an updated geologic study.

Based on our suggestion, RGH performed additional subsurface exploration and mapping on the site between March 11 and 13, 2008, consisting of 12 test pits ranging in depth from 5 to 14 feet. As part of our review, we revisited the site on March 13, 2008 to view the excavations. After completion of the additional subsurface exploration, RGH prepared an updated Preliminary Geologic Study Report, dated April 22, 2008. We received the updated report on July 1, 2008.

## RESULTS OF REVIEW

The updated RGH report indicates that the winery property, in part, is underlain by five landslides that were not previously identified and/or presented in their May 31, 2006 report. Based on our review, we agree with the revised geologic mapping that RGH presents in the updated report. Based on their supporting data, conclusions and recommendations, it is our opinion that the updated RGH report has adequately identified the existing and potential geologic hazards at the site and that they have demonstrated geotechnical feasibility for a winery project, from a preliminary or planning viewpoint. As stated in their report, a detailed, site-specific Geotechnical Study should be prepared prior to final design and construction of the project.

Although not considered to be detracting from the overall validity of their updated report, the subsurface geology presented on Plate 5 in Appendix C should be updated to show the presence of recently identified landslide deposits. Likewise, the licensure stamp for Gary Russey, Professional Geologist (Principal Geologist) as presented on the signature page is expired (3/31/08), for the publish date of this updated report (4/22/08). This does not invalidate the report, however, since there are two other valid geologic licensure stamps and signatures.

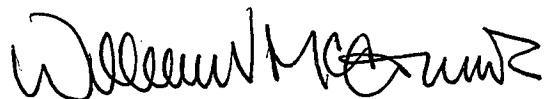
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We appreciate the opportunity to perform this work for you. If you have questions regarding this proposal or require additional information, please contact the undersigned.

Sincerely,

**KLEINFELDER**

A handwritten signature in black ink, appearing to read "William V. McCormick", written over the printed name.

William V. McCormick, CEG 1673  
Principal Engineering Geologist

WVM\jkd

VPE07-0008

245 Wappo Rd



March 5, 2008  
Project 91823

Mr. Jonathan Tracy  
County of Sonoma  
Permit & Resource Management Department  
Project Review Division  
2550 Ventura Avenue  
Santa Rosa, California 95403-2829

**SUBJECT: Review of Supplemental Groundwater Study for  
Cornell Farms  
Sonoma County, California**

Dear Mr. Tracy:

As requested, Kleinfelder is pleased to present this review of groundwater study documents for the Cornell Farms site in eastern Sonoma County, California.

**SCOPE OF WORK**

Kleinfelder was requested to review specific groundwater availability documents for the Cornell Farms LLC site at 420 Wappo Road in Santa Rosa, California, and compare the information provided in the documents to the required criteria listed on the Sonoma County Groundwater Studies Checklist (December 2003). The site is located east of Santa Rosa in a rural area of Sonoma County less than one mile from the Napa County border. The documents provided are listed below.

- Supplemental Groundwater Availability Study for Cornell Farms LLC, Sonoma County, California. Todd Engineers, August 2006
- Letter from Todd Engineers to County of Sonoma PRMD, April 27, 2007.
- Letter from Todd Engineers to County of Sonoma PRMD, June 12, 2007

The Supplemental Groundwater Availability Study was a follow-up report to an earlier groundwater availability study prepared by RGH Geotechnical and Environmental Consultants, dated July 15, 2004. The PRMD responded in their letter dated February 10, 2005, that the County was now using the above-referenced December 2003 checklist and that the RGH report has several deficiencies. The 2006 supplemental report was prepared to respond to those deficiencies. The PRMD requested further clarification in two letters (one dated January 17, 2007, and the other not specifically referenced). The above-referenced two letters from Todd Engineers responded to those requests. Copies of the RGH report and the PRMD letters were not provided for review.

Kleinfelder reviewed the provided documents and compared the provided information to the County Checklist with a focus on the information items in the PRMD letters. Our comments are provided below.

## RESULTS OF REVIEW

The Sonoma Checklist is attached to this letter with indications of where in the Supplemental report or the letters the indicated information can be found.

Overall, the information in the provided documents fulfills the requested Checklist items with the following comments.

We were not provided information indicating whether the County REHS was consulted or agreed with the proposed Cumulative Impacts Area (CIA) (Checklist Item 2). Our review of the proposed CIA indicates that the proposed aerial extent is reasonable.

Checklist Items 9 through 12 were not addressed in the Study. The April 27, 2007, Todd Engineers letter explains that the requested information of Checklist Items 9 through 12 is not considered to be reliable or useful. Considering that the well survey was successful in acquiring 88 local well logs in addition to the Site wells, most with well construction and hydraulic information, we agree that anecdotal interviews with well owners and drillers are not necessary for this study.

Checklist Item 31 requires discussion of potential impacts to surface water and aquatic habitat. The Todd report and letters address the potential impacts to surface water but do not mention aquatic habitat. However, since the overall conclusion is that there will be no significant impact to surface water, then it may also be concluded that there will be no anticipated significant impact to aquatic habitats.

The PRMD letters request additional information on the points listed below. We have added our conclusion on their work.

**“A short explanation of the relationship between groundwater use by this project and surface water flows in Mark West Creek is required (number 21 on the checklist). If there is no connection between the two, then please make this clear.”** - We believe Todd makes a clear and concise description of the relationship between potential groundwater, groundwater conditions and withdrawals, and their interaction with the Mark West Creek. Their approaches are sound and are within what would be considered acceptable practice and standard of care.

**“Please discuss projected cumulative quantities of groundwater pumped (i.e. when all of the parcels in the immediate watersheds have been built, number 18 on the checklist) -** Our opinion is that the approach, description, calculations, and arguments in the reply Todd makes are well founded. They present a logical argument that the potential quantity of cumulative

groundwater usage is a small percentage of the Mark West Creek contribution is a reasonable statement.

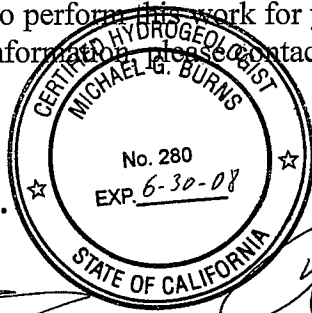
The assumed amount of groundwater usage per household is less than in some areas of California, but seems acceptable for the Mark West area. Even a two-fold increase in this per household value should not significantly alter Todd's argument, although we are not suggesting for such an increase, merely using it as an illustrative statement.


**“Were local property owners and well drillers contacted concerning dry wells dug in the area (numbers 11 and 12 on the checklist)?”** - The discussion of “dry wells” and “dry holes” is informative and to a large part relative. The intent of the checklist questions seems to be more oriented toward identifying whether there have been instances where inadequate supplies of water have been encountered. As such, it seems that the issue as to how a well is reported (e.g., a “dry hole”) versus what was expected is relevant, but does not necessarily address the question in the checklist. So much of the issue surrounding well failures, unsuccessful attempts to develop water in the impact area, and dry holes/wells is a site-specific, geologically driven, driller-dependant issue, when in fact the basic premise of Todd’s argument assumes that each parcel would extract the maximum allowed groundwater and still not apparently adversely impact Mark West Creek.

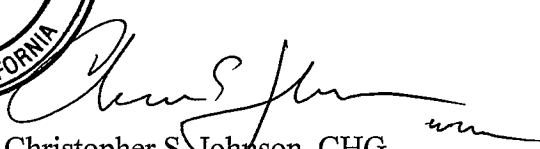
We appreciate the opportunity to perform this work for you. If you have questions regarding this proposal or require additional information, please contact the undersigned.

Sincerely,

**KLEINFELDER WEST, INC.**



  
Michael G. Burns, CHG 280  
Principal Geologist

  
Christopher S. Johnson, CHG  
Principal Hydrogeologist

MGB\CSJjkd

Attachment: Sonoma County Groundwater Studies Checklist (Dec. 2003)

**SONOMA COUNTY GROUNDWATER STUDIES CHECKLIST (DEC. 2003)**

| <b>Compliance with Guidelines</b> |                                                                                                                              | <b>Yes</b>                | <b>No</b>        |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------|---------------------------|------------------|
| 1.                                | Was the report prepared by a Professional Geologist, Certified Engineering Geologist, or Certified Hydrogeologist?           | 27-Apr-07 letter          |                  |
| 2.                                | Is the impact area identified in the report consistent with that mutually agreed on by the geologist, REHS, and the Planner? | Unknown                   |                  |
| 3.                                | Are geologist formations correctly identified and delineated on a map?                                                       | Figure 4                  |                  |
| 4.                                | Does the map have a scale and reference points?                                                                              | Yes                       |                  |
| 5.                                | Is the type of aquifer identified and described?                                                                             | Page 7                    |                  |
| 6.                                | Is the geologic cross section included?                                                                                      | Figure 5                  |                  |
| 7.                                | Are well depths in the area documented?                                                                                      | Appendix 1 – 2            |                  |
| 8.                                | Is the yield of wells in the area known and well documented?                                                                 | Page 10 on                |                  |
| 9.                                | Was an effort made to learn of well failures or unsuccessful attempts to develop water in the impact area?                   |                           | 27-Apr-07 letter |
| 10.                               | Is this effort well documented?                                                                                              |                           | 27-Apr-07 letter |
| 11.                               | Were local property owners consulted?                                                                                        |                           | 27-Apr-07 letter |
| 12.                               | Were well drillers contacted?                                                                                                |                           | 27-Apr-07 letter |
| 13.                               | Is a water balance provided?                                                                                                 | Page 19 on                |                  |
| 14.                               | Is storage capacity calculated?                                                                                              | Page 27                   |                  |
| 15.                               | Is the water in storage calculated for the impact area?                                                                      | Page 27 on                |                  |
| 16.                               | Are the methods used described?                                                                                              | Page 28                   |                  |
| 17.                               | Are the calculations shown?                                                                                                  | Page 28                   |                  |
| 18.                               | Does the report discuss current quantities and projected (cumulative) quantities of groundwater pumped?                      | Report & 27-Apr-07 letter |                  |
| 19.                               | Have other RC-3h reports been conducted in the area?                                                                         | Unknown                   |                  |
| 20.                               | Is this report consistent with those reports?                                                                                | Unknown                   |                  |
| 21.                               | Does the report discuss impacts to surface waters and aquatic habitat?                                                       | Partially in letters      |                  |

**The report indicates that:**

|     |                                                                           |                     |
|-----|---------------------------------------------------------------------------|---------------------|
| 22. | The size of the cumulative impact area (acres):                           | 934 and 1066        |
| 23. | The size of the project property (acres):                                 | 174                 |
| 24. | Proposed annual use (acre-feet):                                          | 3.98 per year       |
| 25. | Depth of proposed well (feet):                                            | 104 to 270 existing |
| 26. | Estimated annual use by others in the cumulative impact area (acre-feet): | 13                  |
| 27. | Number of active wells in the cumulative impact area:                     | 5                   |
| 28. | Average depth of wells in cumulative impact area (feet):                  | 10                  |
| 29. | Average distance to nearest well (feet):                                  | Several listed      |
| 30. | (P) Average annual rainfall (tenths of a foot):                           | 20                  |
| 31. | (ETo) is lost to evapotranspiration (tenths of a foot):                   | 25                  |
| 32. | (Qout) % runoff:                                                          | 26                  |