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October 30, 2008 Project 2262EG

BY EMAIL & MAIL

Dr. Michael Moeller c/o Ms. Pamela Silkwood Horan, Lloyd Law Offices P.O. Box 3350 Monterey, CA 93942-3350

SUBJECT:

Slope Stability Evaluation – Addendum

Proposed Alternative Septic System

194 San Remo Road APN 243-181-006

Monterey County, California

Dear Dr. Moeller:

As requested, this letter provides you with supplemental comments regarding the applicability of our recent Slope Stability Evaluation for 192 San Remo Road to a proposed project at 194 San Remo Road.

## BACKGROUND

Your septic consultant (BioSphere Consulting, Inc.) has prepared the following plan for a proposed enhanced treatment system at the site:

 Alternative Onsite Wastewater System Design for New Development of a Single Family Dwelling, Proposed Enhanced Treatment System Specifying Pressurized Dispersal to Subsurface Drip Tubing and Shallow Pressurized Rock-filled Drainfield; prepared by BioSphere Consulting, rev. date October 28, 2008.

BioSphere has also provided us with various field test data sheets regarding percolation rates and pilot testing of infiltration rates using the proposed leach field system.

We were also provided with copies of the following previous geotechnical and septic investigations: "Geotechnical and Percolation Investigation" by Soil Surveys, Inc. dated September 15, 1999; "Additional Percolation Tests and Addendum to Geotechnical and Percolation Investigation Report..." by Soil Surveys, Inc. dated November 2, 2001; "Geotechnical Investigation for San Remo Road Properties..., by Pacific Crest Engineering, Inc., dated April, 2003; and "Soil Analysis...192 San Remo Road...", by BioSphere Consulting, dated April 23, 2008.

For a proposed septic system at the adjacent 192 San Remo Road, we recently completed a Slope Stability Evaluation dated October 9, 2008. The evaluation was required by the Regional Water Quality Control Board (RWQCB) because slopes in the vicinity of the proposed drainfield locally exceed 20%.

Item No. 26 Attachment No. 16 WDR Moeller Residence 194 San Remo Rd. R3-2008-0061 December 4-5 2008 Meeting October 30, 2008 Project 2262EG

A septic system nearly identical to the one proposed for 192 San Remo Road is now proposed for 194 San Remo Road. Although the proposed septic system would not be sited on slopes steep enough to trigger the RWQCB requirement for a slope stability evaluation, you have nonetheless asked us to comment on the slope stability aspects of the proposed septic system approach for 194 San Remo Road.

## SCOPE OF WORK

The scope of services we provided for our evaluation at 192 San Remo Road included:

- Literature review.
- Geologic reconnaissance of the site and vicinity.
- Drilling, logging, and sampling of 2 exploratory drill holes.
- Preparation of a geologic cross section.
- Laboratory testing.
- Analysis of the above data from a slope stability standpoint.

As part of our reconnaissance in the site vicinity, we observed cut slopes exposed on 194 San Remo Road.

As part of considering the proposed project at 194 San Remo Road, we re-examined the data gathered from these tasks for applicability to the current project.

## FINDINGS

Information regarding the regional geologic setting and local geologic setting presented in our letter report of October 9, 2008, is applicable to the proposed project at 194 San Remo Road. Site elevations range from approximately 193 feet near the northwestern property corner, to approximately 235 feet near the southeastern property corner. We refer the reader to that letter report for additional information regarding regional and local setting.

The proposed septic leach field is set back several tens of feet from the break-in-slope associated with the unnamed drainage that passes north of the site. Slope gradients in the vicinity of the proposed septic leach field range from about 10 to less than 20 degrees.

We were fortunate in that cuts on 194 San Remo Road around the perimeter of the house (under construction) provided continuous, high-quality exposures of native earth materials. The materials exposed in these cuts are consistent with the materials encountered in our borings, and are consistent with the materials described in previous geotechnical and septic design investigations.

## CONCLUSIONS

Based on the existing information, the conditions at 194 San Remo Road appear to be substantially similar to those at 192 San Remo Road, except that slope gradients at 194 San Remo Road are slightly gentler in the vicinity of the proposed septic leach field.

Based on our observations of dense soil and bedrock material within our drill holes, relatively high blow counts obtained in our borings, blow counts obtained in borings on the site by previous investigation, and our laboratory tests on selected soil samples, our previous investigation concluded that the site slopes in the vicinity of the proposed leachfield at 192 San Remo Road are geologically suitable from a slope stability standpoint. Based on the site-

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specific information provided by cut slopes at 194 San Remo Road, we similarly conclude that the site slopes in the vicinity of the proposed leachfield at 194 San Remo Road are geologically suitable from a slope stability standpoint. In our judgment, there is low probability that the proposed septic system, if properly designed, constructed, and operated, will induce slope instability.

If you have any questions, please contact us.

Sincerely,

PACIFIC GEOTECHNICAL ENGINEERING

G. Reid Fisher, Ph.D. CEG 1858

Daniel J. Peluso GE 2367

