California Regional Water Quality Control Board
Central Coast Region

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Arnold Schwarzenegger
Governor

March 7, 2007

Richard LeWarne
County of Monterey
Division of Environmental Health
1270 Natividad Road
Salinas, CA 93906

RE: 74 CORONA ROAD, CARMEL HIGHLANDS (APN 241-052-001-000, PLN050447/REYNOLDS); RESPONSE TO MONTEREY COUNTY REQUEST FOR REVIEW

We reviewed your February 6, 2007, letter and accompanying attachments regarding a proposed septic system at 74 Corona Road in the Carmel Highlands. Your letter requests our review of a proposed septic system at 74 Corona Road for conformance with the Central Coast Region Water Quality Control Plan[1] (Basin Plan). We also reviewed related documents provided separately by Russell Juncal[2] and Aaron Bierman[3], consultants for the project opponents and proponents, respectively.

The provided documents indicate the proposed septic system is in conformance with the Basin Plan with regard to percolation rate, setbacks from existing domestic wells, and vertical separation to first encountered groundwater and bedrock. This determination is based on the limited site data collected from the subject property that would normally be reviewed as part of an on-site wastewater disposal system application. However, we do not feel the proposed septic system is in conformance with narrative Basin Plan prohibitions regarding potential threats to water quality, public health, and conditions of nuisance. A more detailed evaluation that considers the existing and potential on-site disposal system and domestic well densities along with the geology of the Carmel Highland area, and not just the subject site, substantiates a long standing Central Coast Water Board concern regarding the continued development of the Carmel Highlands without the preparation and implementation of an on-site wastewater management plan.

The provided May 8, 2006, well completion report (No. e018450) for the subject site [Kashfi #2] test well indicates the site is underlain by approximately 60 feet of decomposed granite, and 180 feet of hard granite (bedrock without fractures) before encountering fractured bedrock at approximately 240 feet below ground surface (bgs). The test well completion report also indicates groundwater was first encountered at 240 feet bgs (at the depth of observed fractured

[1] September 8, 1994, Water Quality Control Plan, Central Coast Region
[2] January 24, 2007, Ground Zero Analysis, Inc. letter from Russell Juncal to Roger Briggs re: Basin Plan Compliance – permitting of on-site septic systems and domestic wells in Carmel Highlands, 74 Corona Road.
[3] January 31, 2007, transmittal from Aaron Beirman to Matthew Keeling of July 21, 2006, Weber, Hayes & Associates report titled 72-Hour Well Pumping and Aquifer Recovery Test & Well Source and Pumping Impact Assessment for Kashfi Well #2, APN: 241-052-001, Carmel Highlands, Monterey County, California

granite) and the static water level stabilized within the test well at approximately 152 feet bgs. The test well, proposed as a domestic water supply well for the subject site, has a sanitary seal to a depth of 80 feet bgs and is screened within the fractured granite at depths of 454 to 614 feet bgs. An April 26, 2005, percolation test[4] indicates a rapid percolation rate of 10 min/inch within the decomposed granite beneath the proposed leachfield trenches. The on-site test well boring indicates there is competent bedrock separating the decomposed granite from the deeper fractured bedrock and the proposed leachfield design, consisting of 11-foot deep trenches, appears to exceed the minimum vertical separation distances from trench bottom to first encountered usable groundwater of 8 feet and bedrock or other impervious layer of 10 feet per the Basin Plan prohibitions[5]. It should be noted that the lot size requires a single 11-foot deep leachfield trench to increase the trench side wall area and accommodate the required disposal loading rate while maintaining the interpreted 100 foot setback of leachfield trenches from existing domestic wells.

The primary contention by Russell Juncal (Ground Zero Analysis, Inc.) is that the geology beneath the subject property contains soils or formations with continuous channels, cracks, or fractures, and that a subsequent setback distance of 250 feet from on-site wastewater disposal systems to domestic water supply wells needs to be applied (versus the standard 100 foot setback) for new soil absorption systems installed after September 16, 1983[6]. Mr. Juncal argues that fractured bedrock conditions generally exist in the Carmel Highlands from the ground surface to the deeper water bearing zone where the domestic water supply wells are screened. His argument is based on the presence of fractured granite outcroppings throughout the area and a well completion report (No. 517481) for the nearby Garren property at 73 Spruce showing weathered and fractured granite directly beneath the decomposed granite from depths of 92 feet to 220 feet bgs. The groundwater discussion found on page 5 of the Weber, Hayes & Associates (WHA) July 21, 2006, well report also substantiates this concern by stating the "Kashfi Well #2 yields groundwater from fractures in the granite rock" and that "groundwater from these fractures is derived from precipitation, which percolates into the subsurface." The provided well completion reports indicate domestic water supply wells in the vicinity of the project site are pumping water from the fractured granite at depths as shallow as 180 feet bgs (Garren well). In addition, Figure 4 - Geologic Cross Section A-A' in the WHA well report depicts a geologic formation that is not conducive to a high density of on-site wastewater disposal systems or domestic drinking water wells. The cross section shows a thin surface layer of terrace deposits and 60 feet of dense sand of limited aerial extent underlain by fractured granite sloping towards the Pacific Ocean. A high density of on-site wastewater disposal systems in this area will likely result in surfacing effluent and potential impacts to existing domestic water supply wells in the area that are pumping groundwater from the fractured bedrock.

There are reportedly six existing and one proposed leachfield disposal systems (two of which are existing 50 foot deep seepage pits) within 250 feet of the subject site proposed domestic supply well, three existing domestic water supply wells within approximately 1,000 feet, and several additional undeveloped lots within 1,000 feet of the subject site that may be developed

[4] Soil Surveys Inc. May 10, 2005, Geotechnical Investigation with Geologic Considerations for New Single Family Home with Garage and Septic System at 74 Corona Road, APN 241-052-001, Carmel Highlands, California for Mr. And Mrs. Rick Kashfi

[5] Central Coast Region Water Quality Control Plan, VIII.D.3.i Individual Alternative and Community Systems Prohibitions, paragraph nos 3 and 5, respectively.

[6] Central Coast Region Water Quality Control Plan, VIII.D.3.i Individual Alternative and Community Systems Prohibitions, paragraph no 1.

in the future that will require individual on-site disposal systems and domestic water supply wells. Separate recharge analyses provided by consultants for the project proponents and opponents indicate between 24% (does not include the proposed subject site disposal system) and 78% of the recharge for the area surrounding the subject property proposed water supply well is comprised of wastewater effluent from on-site disposal systems. Regardless of whether fractures exist directly beneath the subject site, the provided recharge analyses coupled with rapid percolation rates, lack of potential treatment provided by the decomposed granite, and noted fractured bedrock conditions within 1,000 feet of the subject site along with the high density of existing on-site wastewater disposal systems poses a significant threat to the domestic water supply wells in the site vicinity. Consequently, we strongly recommend the County exercise a higher level of scrutiny in its review and approval of on-site wastewater disposal systems and domestic water supply wells in the Carmel Highlands area given any portion of disposed effluent may reach a domestic water supply well, as alluded to by the two separate recharge analyses and geologic evaluations even though minimum county ordinance, Department of Water Resources Bulletin, or Basin Plan setbacks are met.

According to our recent verbal communication with you, a number of on-site wastewater disposal system failures have been documented over the years in the Carmel Highlands area. We reportedly requested an accounting of all on-site wastewater disposal system failures from your agency sometime back in 2000. Unfortunately these documents were not available for our review at the time this response was prepared. In response to our recent verbal request[7] for an updated list of septic system failures in Carmel Highlands, you indicated that an updated list would be difficult to compile in the time frame needed for our review, given your agency's current record keeping and filing system. Based on our discussion with you, most of the reported failures were for older homes with substandard systems in areas of the Carmel Highlands with even more severe geologic constraints. Failures primarily consisted of failing leachfields and surfacing effluent. We also understand that the County has denied numerous on-site wastewater disposal system permits for lots within the Carmel Highlands because they could not meet various Basin Plan requirements or county health department standards.

We sent Monterey County a February 27, 2001 letter[8] indicating our desire to have the Carmel Highlands connected to the Carmel Area Wastewater District (CAWD) sewer system. At that time, there was an opportunity to install a trunk line of sufficient capacity to handle the entire Carmel Highlands area wastewater flow as part of the Point Lobos State Reserve sewer project. Both CAWD and the California Department of Parks and Recreation were in support of providing service to Carmel Highlands[9]. Unfortunately, our efforts only resulted in the connection of the Carmel Highlands Sanitary Association (consisting of twelve single family residences) and Tickle Pink Inn to CAWD for sewer service. The trunk line was reportedly sized to handle the wastewater flow from these areas only. We attached a copy of the December 1979 draft Carmel Sanitary District Areawide Facilities Plan & Carmel Valley/Highlands Study Environmental Impact Report (1979 EIR) introduction and summary to our February 27, 2001 letter for reference. In short, the 1979 EIR summary recommends sewering of the Carmel Highlands to protect groundwater quality and public health. Evidently

[7] February 23, 2007, telephone correspondence between Central Coast Water Board staff, Matthew Keeling and Richard LeWarne

[8] February 27, 2001, Central Coast Water Board letter from Roger Briggs to Sally R. Reed, County Administrative Officer, re: Response to County of Monterey Letter, Dated January 3, 2001, Regarding the Sewering of Carmel Highlands.

[9] January 22, 2001, Carmel Area Wastewater District letter re: Providing Service to the Highlands Area South of Carmel

this recommendation was overcome by opposition from the existing residents who wanted to slow down and limit any future development within the Carmel Highlands. The absence of a sewer system only restricts additional development to an unknown number of lots that can be built in accordance with the Basin Plan and county ordinances. As development of the existing lots within Carmel Highlands continues, it will put an additional strain on the area's limited ability to handle on-site wastewater disposal.

It should be noted that the proposed on-site system would not be in conformance with the Basin Plan[10] for "new divisions of land" given the property consists of a substandard lot of less than one acre and soil and other physical constraints are **not** particularly favorable to smaller lot sizes for the reasons discussed above. As a lot-of-record of less than one acre the subject site is not held to the same standard as new divisions of land with regard to the Basin Plan requirements governing the density of such systems. We assume that all of the remaining undeveloped lots in the Carmel Highlands are lots-of-record of less than one acre. Given the substandard lots-of-record and commonly accepted geologic shortcomings of the Carmel Highlands area with regard to on-site wastewater disposal, the Basin Plan identified the Carmel Highlands as an area needing additional study and the development of regulatory controls to address future development via the use of on-site wastewater disposal systems to protect water quality and public health. Paragraph 14 of Basin Plan section VIII.D.3.h provides recommendations for local agencies to prepare on-site wastewater management plans for specific areas, including Carmel Highlands. Section VIII.D.2.b of the Basin Plan discusses the rationale and basic components of on-site wastewater management plans. Please note that we are seriously considering changing these recommendations to enforceable requirements in future Basin Plan amendments.

Based on the above discussion we do not believe the County's existing level of oversight for the continued permitting of on-site wastewater disposal systems in Carmel Highlands is in conformance with the prohibitions outlined in paragraphs 17 and 18 of Basin Plan section VIII.D.3.i as follows:

17. Lot sizes, dwelling densities or site conditions causing detrimental impacts to water quality.

18. Any area where continued use of on-site systems constitutes a public health hazard, an existing or threatened condition of water pollution, or nuisance.

Consequently, we do not support the County's issuance of any additional on-site wastewater disposal system permits within the Carmel Highlands area until a sufficiently detailed wastewater management plan is prepared that addresses the shortcomings of this area with regard to its capacity to handle any additional on-site wastewater disposal systems. Given the absence of an area-wide evaluation, we question whether the establishment of a 250 foot setback for on-site wastewater disposal systems from domestic water supply wells would be sufficiently protective of water quality and public health.

Please note that we do not agree with your interpretation of the California Department of Water Resources (DWR) Bulletin 74-90 regarding setback distances of domestic water supply wells from on-site wastewater disposal system distribution boxes. We believe a distribution box is neither a part of a septic tank or sanitary sewer line, but is part the septic system leachfield and

[10] Central Coast Region Water Quality Control Plan, VIII.D.3.i Individual Alternative and Community Systems Prohibitions, paragraph no 11.

should be held to the minimum setback distance of 100 feet and not 50 feet. We suggest you contact DWR to verify their setback requirements.

If you have questions regarding this matter, please contact **Matthew Keeling at (805) 549-3685** or mkeeling@waterboards.ca.gov, or John Robertson at 805-542-4630.

Sincerely,

FOR Roger W. Briggs
Executive Officer

Paper File: Monterey County Septic Systems
Electronic File: H:\Miscellaneous\74 Corona Rd Carmel Highlands.doc
Task Code: 12601

cc:

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