GRIBI Associates
Geological and Environmental Consulting Services

SENT VIA FACSIMILE

October 3, 2001

Ms. Susan Hugo
Alameda County Department of
Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502-6577

Mr. Ravi Arulananthan
San Francisco Bay Regional
Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

Subject: Evaluation of PCE Impacts Relative to Planned Residential Use
Former Liquid Sugars Facility, 1275 66th Street, Emeryville, California
GA Project No.: 201-01-01

Ladies and Gentlemen:

In anticipation of our planned meeting on Thursday, October 4, 2001, this letter seeks to provide our evaluation of groundwater PCE impacts relative to the planned residential use at the project site (see Figure 1). The reason for this evaluation is to provide a rational for our belief that groundwater PCE impacts have been adequately addressed, and that no additional investigative or remedial measures should be required relative to groundwater PCE impacts.

We believe that with the planned implementation of agreed-upon measures (no ground floor residences, installation of subgrade vapor barriers, and adoption of a deed restriction), regulatory "No Further Action" should be granted relative to identified groundwater PCE impacts on the site. The basis for this belief is as follows:

1. **Identified groundwater PCE impacts on the project site are minimal.** Of the five grab groundwater samples collected in the northeast corner of the site, the sample in the extreme northeast corner contained 150 ppb, and the sample about 50 feet west contained 11 ppb. The three other samples in the northeast corner, along with 13 other samples on the south side of 66th Street (including Oliver Rubber samples), contained no detectable PCE.

2. **Identified groundwater PCE impacts on the project site are substantially below Risk-Based Screening Levels.** The Regional Board's groundwater RBSL for groundwater PCE emissions to indoor air is listed as **15,000 ppb** (fine-grained soil, Appendix 1, Table F, *Application of Risk-Based Screening Levels and Decision Making to Sites With Impacted Soil*

and Groundwater, August 2000). In talking to Mr. Roger Brewer of the Regional Board on October 2, 2001, Mr. Brewer stated that a revised RBSL for groundwater PCE emissions to indoor air of **3,200 ppb** will be included in upcoming revisions to the RBSL tables. Mr. Brewer further stated that the lower RBSL of 3,200 ppb is to be used, even though almost all empirical soil vapor data in the area agrees with the previous 15,000 ppb model value. The highest concentration of groundwater PCE identified on the project site is **150 ppb**.

3. **There is no expectation that identified groundwater PCE impacts will change significantly in ensuing decades.** Based on our experience and on the hydrogeologic regime in the area (silty clay soils, semi-confined groundwater conditions), we would expect that: (1) The releases that caused the PCE groundwater impacts on the project site and on the north adjacent site did not occur in the recent past; and (2) Large-scale changes in groundwater PCE plume concentrations will be noticed over several years or decades, and not over months or quarters.

4. **The planned residential development includes engineering controls that will minimize any risk to residential occupants.** Pulte will implement the following engineering controls: (1) No residential living spaces on the ground floor (ground floor to be primarily garage space); (2) Concrete slab flooring throughout all building areas; (3) Vapor barrier underlying the concrete slab flooring in the northeast corner of the site; and (4) Minimal landscaped areas. Thus, while the identified groundwater PCE maximum of 150 ppb is well below the 3,200-ppb groundwater RBSL for indoor air exposure, the planned engineering controls provide an additional safety factor that is significant.

While chlorinated solvents are generally viewed as being more pernicious than fuel hydrocarbons, it is our understanding that regulatory decisions in both cases should be based on actual risk evaluation. In the context of this case, where the regulatory Tier I RBSL is 20 times higher than the maximum identified contaminant concentration and the silty clay soils dictate that conditions won't change in the foreseeable future (certainly not by a factor of 20 times), we believe that the planned residential development should be allowed without additional investigation relative to chlorinated solvents.

We appreciate the opportunity to provide this information for your review. Please contact us if there are questions or if additional information is required.

Very truly yours,

James E. Gribi
Registered Geologist
California No. 5843

c John Boshard, Richards and Sterling
Steve Kalmbach, Pulte Home Corporation
Ignacio Dayrit, City of Emeryville