Tamalpais
Environmental
Consultants

December 4, 2012

Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Subject: Comments on Air Sparge and Soil Vapor Extraction and Dual-Phase Extraction Pilot Test Reports submitted by Conestoga-Rovers & Associates, 4212 First Street, Pleasanton, California.

Dear Mr. Wickham:

Tamalpais Environmental Consultants (TEC) has prepared this letter on behalf of the property owners of 4212 First Street in Pleasanton. The purpose of this letter is to provide comments to the Alameda County Environmental Health (ACEH) agency related to the Air Sparge and Soil Vapor Extraction and Dual-Phase Extraction Pilot Test Report, submitted by Conestoga-Rovers & Associates (CRA), dated October 30, 2012. We encourage the ACEH to consider the following comments and require remediation activities for the existing impacts at the property (Site). TEC was able to review a copy of the draft CRA report prior to submission and provided similar comments that were not included in the final CRA report.

Comment 1: Remediation is Appropriate

The State Water Resources Control Board (SWRCB) has recently updated the Low-Threat Underground Storage Tank Case Closure Policy that establishes criteria to evaluate whether remediation is appropriate for underground storage tank (UST) sites in California. There are several criteria for low-threat closure that do not appear to be met by the conditions of the Site and it would be appropriate to implement some type of remediation.

Secondary Source

A residual mass of petroleum hydrocarbon exists in the subsurface at the Site. Based on concentrations of soil vapor collected during the 2012 pilot test, CRA estimated that petroleum hydrocarbons could be recovered at a rate of between 36 to 85 pounds per day. In the previous remediation pilot test, Delta Environmental reported that 286 pounds of petroleum hydrocarbons were recovered over a 5-day period. There could be thousands of additional pounds of petroleum hydrocarbons that could be readily recovered by soil vapor extraction (SVE). While current shallow soil vapor concentrations are relatively

low, this residual mass of petroleum hydrocarbons in the deeper soil vapor could act as a source of petroleum hydrocarbons to shallow soil vapor or to groundwater. The low-threat closure policy indicates that the removal of a secondary source is required to the extent practicable.

Detections of MTBE

MTBE is specifically identified in the low-threat closure criteria as a contaminant of concern. MTBE was detected during the May 2012 monitoring event at 3,400 µg/L in Well MW-1, 3,000 µg/L in Well MW-2, and 4,900 µg/L in Well MW-4. The low rate of MTBE degradation would seem to indicate that some type of additional remediation or monitoring is warranted.

Comment 2: Remediation is Technically Viable

The current and previous pilot test reports indicate that significant mass removal can be accomplished using well established soil and groundwater treatment technologies. The majority of the recoverable mass appears to be in soil vapor, which is in contact and equilibrium with impacted soil. There are no significant physical or infrastructure limitations that would prevent the installation of a remediation system capable of removing impacted soil vapor.

The SVE pilot test was aggressive in the use of a 25 horsepower pump connected to a single extraction well. High vacuums and flows were induced, which showed good indications of influence in surrounding wells. Lower vacuums and flows may be sufficient to remove the majority of the impacts in the shallow soil vapor while generating lower treatment volumes and less noise.

CRA identified several challenges in implementing groundwater remediation with air sparging (AS) or dual-phase extraction (DPE). These technologies have a variety of advantages and disadvantages to address impacted groundwater at the Site. The enhanced petroleum hydrocarbon recovery observed by CRA during both the AS and DPE pilot tests indicate the potential for recovery of at least a portion of the compounds present in groundwater through enhanced recovery with SVE. Either technology could lower the mass of petroleum hydrocarbons in groundwater.

Comment 3: Necessity for Deed Restriction

One of the criteria included in the low-threat closure policy is the willingness of the property owner to accept a deed restriction prior to closure. The property owner is not willing to accept a deed restriction. The previous CAP submitted by CRA in October 2011 erroneously indicated that the contract with the owners includes "specific restrictions on site development to commercial uses excluding child day care, elder care,

or other similar sensitive uses." The contract is limited to the period of operation of the service station and does not limit the long-term development of the property as described in the CAP. While the service station is now likely to operate for several more years, the assumption that this property could not be used for any sensitive uses is inappropriate. The site owner is willing to cooperate with a site closure that does not require any deed restriction and that will leave the property in condition reasonably appropriate to future development for any potential legal use, unaffected by whatever residual contamination is deemed acceptable for the site closure.

We appreciate your consideration of these comments as you prepare your response to the Pilot Test Reports submitted for the property. The owners of the property believe that the operators of the service station have a responsibility to ensure that the Site has not been significantly impacted by the historical operation of the service station. If you have any questions regarding the information provided, please contact Aaron O'Brien at (415) 456-5084.

Sincerely,

Aaron O'Brien, PE, CHMM
President

cc: Douglas & Mary Safreno
Jim Frassetto, Miller, Starr & Regalia
Peter Schaefer, Conestoga, Rovers & Associates